Thailand Millennium Development Goals Report 2009

Office of the National Economic and Social Development Board
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Preface

Thailand MDGs Report 2004 marked the beginning of the MDGs drive in Thailand; it played an important role in stimulating government agencies, the private sector and the public's interest in using indicators and data to set development targets and monitor progress at national, provincial and local levels. Localizing the indicators to fit the national and local context, improving data quality, data collection and databases is an important part of the process.

This is the second MDGs Report that is based on extensive and active participation. Key governmental agency responsible for driving the development process of each goal/target played an important role in analyzing the situation, identifying the challenges, and assessing the progress/likelihood of success, as well as outlining development strategies. All in all, the MDGs process has expanded, responsible parties clearly identified, to ensure that the MDGs targets and indicators become an integral part of development planning, implementation, and evaluation of each sector/agency.

This Report shows that Thailand has met several MDGs targets, i.e. poverty and hunger, universal primary education, gender equality, fight against HIV/AIDS, access to clean drinking water and sanitation, improving the lives of people in slums, and global partnership. More strenuous effort is needed to achieve sustainable development and to address the country's ambitious MDG+ targets on child mortality and maternal health in remote areas, all of which requires relentless engagement from all parties.

The Office of the National Economic and Social Development Board, as the national MDGs coordinating agency, would like to acknowledge excellent collaboration from all government agencies and other organizations in the preparation of the Report as well as active participation throughout the MDGs process. Such contribution has made the MDGs experience extremely useful especially in development evaluation for sustainable development.

Office of the National Economic and Social Development Board

Acknowledgements

Sub-Committee on Thailand Millennium Development Goals Report 2009

Thailand Millennium Development Goals Report 2009 was a product of a long and extensive collaboration spearheaded by the Sub-Committee led by Suwanee Khamman (Deputy Secretary General, NESDB) as chairperson; Porametee Vimolsiri (Deputy Secretary General, NESDB) as deputy chairperson. The sub-committee was composed of Jiraporn Sudanich (Counsellor, Ministry of Foreign Affairs); Thanchanit Tansrisuroje (Environmentalist, Ministry of Natural Resources and Environment); Suchada Wattana (Policy and Plan Analyst, Ministry of Interior); Orasa Kovindha (Policy and Plan Analyst, Ministry of Public Health); Chitra Chawkeo (Policy and Plan Analyst, Ministry of Education); Pornsom Paopramot (Specialist on Women's Affairs, Ministry of Social Development and Human Security); Benjaporn Chatrakul na Ayudya (Director of Statistical Forecasting Bureau, Ministry of Information and Communication Technology); Tongta Khiewpaisal (Programme Specialist, United Nations Development Programme, Thailand); Pattama Teanravisitsagool (Director of Social Data-Based and Indicator Development Office, Office of the National Economic and Social Development Board); Chirapun Gallaprawit (Director of Social Development Strategy and Planning Office, Office of the National Economic and Social Development Board); Montree Boonpanit (Director of Agriculture, Natural Resource and Environment Planning Office, Office of the National Economic and Social Development Board); Suladda Sirilerkpipat (Policy and Plan Analyst, Office of the National Economic and Social Development Board)

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Ministry of Interior: Mae Hong Son Provincial Office; Nakhon Phanom Provincial Office; Trang Provincial Office

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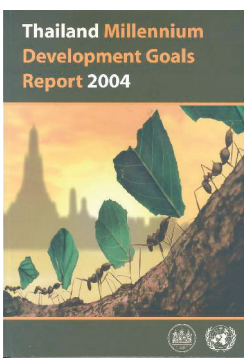
Contents

Thailand and MDGs

In September 20000 Thailand was among 189 countries that pledged support to the Millennium Declaration that placed priority on human development and on narrowing development gaps within and among countries. The Millennium Declaration provides a basis for the Millennium Development Goals (MDGs) set against the 2015 timeframe.

MDGs Activities in Thailand

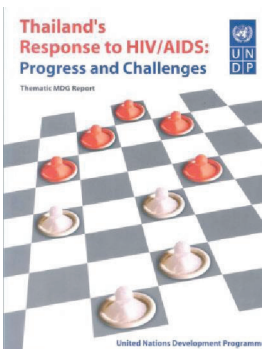
Having recognized the significance of the Millennium Declaration and the MDGs, all development partners in Thailand have given enthusiastic support and joined hands in implementing activities toward the MDGs.



Office of the National Economic and Social Development Board (NESDB), the national focal point for MDGs, is responsible for coordinating among many public, private and civil society organizations and the UN agencies.

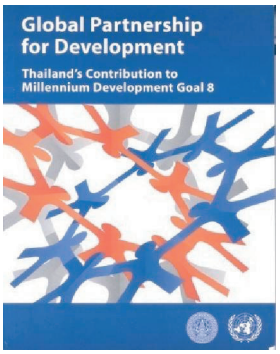
"Thailand Millennium Development Goals Report 2004", the first national MDG report, presented development situations, achievements, and challenges in striving toward the MDGs. The report showed that Thailand had achieved MDG targets on poverty, hunger, gender equality, HIV/AIDS and Malaria a decade prior to the target, was very close to achieving education targets, and made a steady progress on environmental management. Thailand also embarked upon the "MDG Plus" challenge by adopting MDG+ targets and indicators to monitor progress in aspects that were relevant, ambitious, broader or more specific than those set by the MDGs.

In addition to the main report, Thailand published a *"People's MDG Report"*, a reader-friendly edition to make MDGs more accessible to the public.



"Thailand's Response to HIV/AIDS: Progress and Challenges" published by UNDP Thailand in 2004, shared Thailand's best practices in fighting HIV/AIDS at the World Conference on HIV/AIDS in Bangkok in 2004.

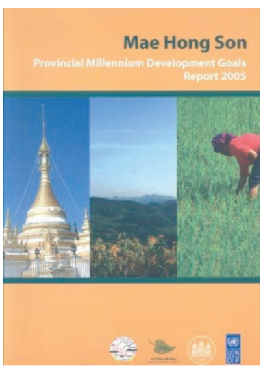
"Women's Right to a Political Voice in Thailand", was a collaboration between UNDP Thailand and the Women for Democratic Development Foundation, published in 2006. The report analyzed situations, obstacles and development plans to promote women's role in politics, which is one of Thailand's most challenging targets.



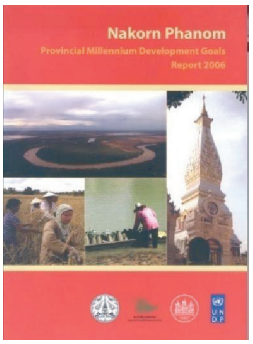
"Global Partnership for Development: Thailand's Contribution to Millennium Development Goal 8" was produced by the Ministry of Foreign Affairs and the UN Country Team in Thailand in 2005.

"Provincial MDG Reports– Mae Hong Son, Nakhon Phanom, and Trang" were launched in 2005, 2006 and 2008, respectively. The reports represented the initiative of the NESDB, UNDP Thailand, and the Thailand Environment Institute to pilot the MDG process at the provincial level.

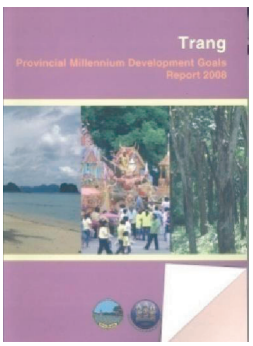
- **Mae Hong Son** is a border province in the North where 90% of the population is hill tribes and ethnic minorities. Mae Hong Son has the highest poverty incidence, and was ranked at the bottom of the Human Achievement Index (HAI) in 2007 and 2009[1].



- **Nakhon Phanom** is a border province in the Northeast where poverty incidence is highest. The province was at the bottom on the HAI in 2003.



- **Trang** is not a poverty-stricken province, but features the characteristics of a Southern province where demographic, cultural and religious factors play an important role in human development**.**



Ministry of Public Health (MoPH) is responsible for implementing many MDG targets. The MoPH produced a series of documents and materials to promote the understanding of MDGs and to support their implementation, including:

- ***"Institutional Development for the Monitoring and Evaluation of MDGs"***, in collaboration with the WHO, 2005.

- "***Manual on MDGs Data Collection***", 2009.

The Ministry of Social Development and Human Security (MSDHS), established in 2002, integrated MDG targets with national targets for gender development and women empowerment, and produced gender-disaggregated data.

The National Statistical Office (NSO) included MDG and MDG+ indicators in Thailand Development Profile to facilitate development planning, monitoring and evaluation at the national and provincial levels.

[1] UNDP Thailand developed Human Achievement Index – HAI, based on the Human Development Index – HDI, is a composite index to assess human development at the provincial level in 2003.

Provincial MDGs

"Provincial MDGs" was a pilot project to use MDGs in provincial planning and development. At the provincial level, participation can be more inclusive. A common practice is to establish a task force comprising of representatives from various government agencies, the private sector, and NGOs, with the Provincial Governor assuming the chair. The MDG process served as a forum for provincial and local organizations to analyze development situations in a comprehensive manner. They studied the MDG targets and indicators and localized them to suit the local context. Some indicators were also added to reflect the province's specific situation. The MDG targets and indicators were then combined with other sets of indicators that the province used to monitor development progress. The process also included data collection.

Box 1.1 Examples of localized MDGs

Examples of localized MDG targets at the provincial level (MDG*)	
Poverty	Reduce poverty incidence to 20% by 2009. (Mae Hong Son)
Education	90% of the children complete lower secondary education by 2009; 70% of the children complete upper secondary education by 2015. (Mae Hong Son)
Gender equality	Increase the proportion of women in local administrative organizations to 4% by 2015. (Trang)
Child's health	Reduce low-birth weight (<2,500 grams) to less than 7% by 2009. (Nakhon Phanom)
Malaria and other diseases	Reduce dengue fever incidence to 50 per 100,000, and achieve 90% satisfaction rate for the provision of health services. (Trang)
Environmental management	Increase the participation of local administrative organizations in waste and waste water management. (Trang)

Overview of Progress on MDGs and MDG+ Targets

Progress on National MDGs

Since the 2004 assessment, Thailand has scored further progress on some targets, maintained the momentum on others. But new obstacles have delayed the progress for some targets. Some targets are inapplicable, and some are not possible to assess due to change of data. Most MDG+ targets proved to be too challenging; they were not achieved or were unlikely to be achieved by the set timeframe. In these cases, government agencies have confirmed the commitment and included them as national or sectoral targets.

The following table summarizes the 2009 assessment, compared with the 2004 assessment.

Table 2.1 MDGs and MDG+ Targets

MDGs and MDG+ Targets		2009 Assessment	2004 Assessment
Goal 1: Eradicate Poverty and Hunger			
MDG 1A	Halve, between 1990 and 2015, the proportion of population living in extreme poverty	Achieved	Achieved
MDG+	*Reduce poverty to less than 4% by 2009*	*Not achieved*	-
MDG 1B	Achieve full and productive employment and decent work for all, including women and young people	Potentially	-
MDG 1C	Halve, between 1990 and 2015, the proportion of population who suffer from hunger.	Achieved	Achieved
Goal 2: Achieve Universal Primary Education			
MDG 2A	Ensure that, by 2015, boys and girls alike, will be able to complete a full course of primary schooling	Achieved	Nearly achieved
MDG+	*Universal lower secondary education by 2006*	*Not achieved*	-
MDG+	*Universal upper secondary education by 2015*	*Unlikely*	-
Goal 3: Promote Gender Equality and Empower Women			
MDG 3A	Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	Achieved	Achieved
MDG+	*Double the proportion of women in the national parliament, Sub-district Administrative Organizations, and executive positions in the civil service by during 2002-2006*	*Not achieved*	-
Goal 4: Reduce Child Mortality			
MDG 4A	Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	Not applicable	Not applicable
MDG+	*Reduce infant mortality rate to 15 per 1,000 live births by 2006*	*Cannot assess due to change of data*	-
MDG+	*Reduce by half, between 2005 and 2015, the U5MR in highland areas, selected northern provinces and three southernmost provinces*	*Unlikely*	-
Goal 5: Improve Maternal Health			
MDG 5A	Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	Not applicable	Not applicable

MDGs and MDG+ Targets		2009 Assessment	2004 Assessment
MDG+	*Reduce maternal mortality ratio to 18 per 100,000 live births by 2006*	*Cannot assess due to change of data*	-
MDG+	*Reduce by half, between 2005 and 2015, the maternal mortality ratio in highland areas, selected northern provinces and the three southernmost provinces*	*Potentially*	-
MDG 5B	Achieve, by 2015, universal access to reproductive health	Likely	-
Goal 6: Combat HIV/AIDS, Malaria and Other Diseases			
MDG 6A	Have halted by 2015 and begun to reverse the spread of HIV/AIDS	Achieved	Achieved
MDG 6B	Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it	Likely	-
MDG+	*Reduce HIV prevalence among reproductive adults to 1 percent by 2006*	*Cannot assess due to change of data*	-
MDG 6C	Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	Malaria – Achieved TB – Unlikely Coronary Artery Diseases - Unlikely	Malaria – Achieved TB - Potentially
MDG+	*Reduce malaria incidence in 30 border provinces to less than 1.4 per 1,000 by 2006*	*Achieved*	-
Goal 7: Ensure Environmental Sustainability			
MDG 7A	Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources	Potentially	Potentially
MDG 7B	Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	Potentially	Potentially
MDG+	*Increase the share of renewable energy to 8% of the commercial final energy by 2011*	*Likely*	-
MDG+	*Increase the share of municipal waste recycled to 30% by 2006*	*Not achieved*	-
MDG 7C	Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	Achieved	Achieved
MDG 7D	By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	Likely	Likely
Goal 8: Develop a Global Partnership for Development			
MDG 8B	Address the special needs of the least developed countries	Achieved	-
MDG 8E	In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	Achieved	-
MDG 8F	In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	Achieved	-

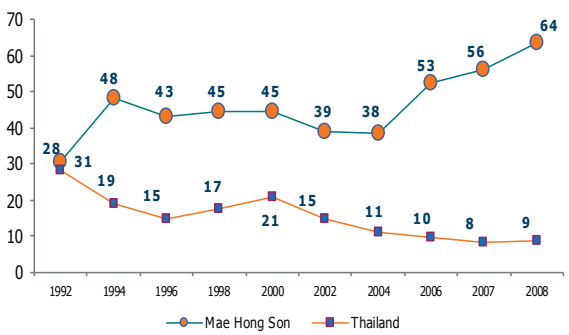
Progress on Provincial MDGs

Provincial MDG experiences varied depending on the intensity of the MDG drive and the strength of responsible agencies. As MDG/MDG+/MDG* targets and indicators were integrated into the provincial development process, there was no separate MDG monitoring and evaluation system. The transfer of responsible officials to other provinces and inadequate participation by non-governmental groups constituted major problem in terms of continuity.

Mae Hong Son

Mae Hong Son has been among the top ten provinces in terms of **poverty** incidence. Since 2004, in contrast with the rest of the country, poverty incidence in this province shows an upward trend. In 2008, poverty incidence was 63.57%, which was a long way from the MDG* target of 20% by 2009. Important obstacles were mountainous terrain and settlement pattern of highland peoples, which made transport and access to basic services very challenging. A notable progress was made in the areas of **clean drinking water**; households relying on water from river/creek/canal for consumption dropped from 51.6% to 31.2% during 2006-2008; people have had access to pipe water and bottled water. Proportion of population having **clean sanitation** also increased from 88.9% to 93.4%.

Figure 2.1 Poverty Incidence, 1992-2008



Source: NESDB, 2009

Maternal and child's health is still an important problem. Maternal mortality ratios fluctuated widely. In 2008 which was considered a good year, the ratio was very high at 64.6 per 100,000 live births. Three-fourths were due to hemorrhage after delivery. During 2004-2007 the ratio of completed ante-natal care (4 times) increased from 69.4% to 78.7%, and births assisted by skilled health personnel increased from 76.7% to 83.5%. Nevertheless, preventing and treating hemorrhage requires medical skills that are not available at community health centers. Hence, distance to health services, and cultural, traditional norms and values are important barriers. Infant mortality rate declined and was only 8.7 per 1,000 live births in 2008. But this is likely due to underreporting, a result of failure to report births and deaths in due course. The good news is that underweight among children under five dropped from 16.3% in 2004 to 7.8% in 2009, which is still much higher than in other provinces.

There has been good progress in the area of **education.** Gross enrolment in primary education increased from 89.0% to 99.6% during 2006-2009. At lower secondary level, the increase was from 51.2% to 89.7%, therefore meeting the MDG* target of having 90% of the children complete lower secondary education by 2009. In upper secondary education, enrolment increased from 29.2% to 41.8%, which means that there is a good chance to achieve the MDG* target of having 70% of the children complete upper secondary education by 2015.

Progress has been made in the fight against **HIV/AIDS**, but vigilant monitoring is needed. HIV infection among pregnant women has drooped. Almost all pregnant women that visited the health centers received counseling on AIDS. But the service covered only 10.5% of unmarried women in reproductive ages. It should also be noted that community organizations and Sub-district Administrative Organizations (SAOs) played an important

role in distributing condoms to difficult-to-reach target groups such as the youth and illegal migrant workers.

With regard to **major diseases**, Malaria is a local disease and constitutes an important health threat; the province is among top five provinces in terms of Malaria cases. This is due to difficult transport, and a large number of foreign migrant workers that use Mae Hong Son as an entry point in and out of the country. Tuberculosis and heart disease are also an important threat. Hypertension is 3-5 times higher than the national average. Diabetes nearly doubles the national average. This is due to several risk factors; local people are heavy smokers and drinkers and have high cholesterol culinary culture.

As for **natural resources and the environment**, 83.9% of the area is forest land, and about half of the area is conserved and protected area. During 2006-2008, Mae Hong Son achieved a MDG* target for having local administrative organizations and the people participated in natural resource and environmental management. Community forest expanded from 0.88% to 1.69% of the provincial area.

Nakhon Phanom

Poverty incidence dropped from 26.0% in 2006 to 17.9% in 2007, but rose to 24.6% in 2008. Nevertheless, the province achieved a MDG* target of having no more than 4% of the households with income less than 20,000 Baht/person/year by 2009; no household fell below this target. Deposit to the community funds increased from 1.5% in 2006 to 8.9% in 2008.

Like all other provinces, Nakhon Phanom made good progress in the expansion of **education** opportunity. Gross enrolment rate at primary level increased from 85.8% in 2006 to 94.4% in 2008. The rate remained at 86.7% at lower secondary level, and stayed at 47-48% for upper secondary level.

The province also scored well on **gender equality**, but had only 8.4% female representation in local administrative organizations against the MDG* target of 10% by 2009.

In terms of **maternal and child's health**, the province adopted a MDG* target to reduced low birth weight (> 2,500 grams) to less than 7% by 2009. The result was a drop from 9.7% in 2006 to 8.7% in 2008. Maternal mortality ratio also dropped from 25.6 per 100,000 live births in 2006. There was no report of maternal death in 2008. The rate of completed antenatal care increased from 74.0% to 77.8%. Underweight among children five years and younger dropped from 3.1% to 1.6% during the same period.

In general, there has been good progress on the fight against **HIV/AIDS and other major diseases,** despite the rise of HIV infection among pregnant women from 0.40% to 0.60% during 2006-2008. HIV infection among military conscripts remained at 0.30%. Nakhon Phanom has had no Malaria-related death since 1999 and no incidence was reported since 2006. Tuberculosis prevalence was under the MoPH's target at 63 per 100,000 population. DOTS success rate was high at 91.3% in 2008.

Trang

Poverty incidence in Trang has been consistently lower than the national average; it was only 1% in 2008. This is due to the strength of the communities. Communities are self-reliant and every village has its own community development plan. During 2007-2009, Trang achieved the MDG* target to expand memberships of saving groups from 2.1% to 2.2% and that of village banks from 1.6% to 10.7%.

Trang has long been a high achiever in terms of **education.** Education expansion has continued throughout the years. In 2009, primary, lower secondary, and upper secondary gross enrolment rates were 99.0%, 92.7% and 48.2%, respectively.

As for **gender equality and women empowerment**, the share of women in local administrative councils in 2008 was 8.1%, close to the national average. But women represented only 3.3% of high-level management of the local administrative organizations. It is however expected to achieve the MDG* target of 4% by 2015.

During 2006-2008, **maternal mortality ratio** dropped from 26.1 to 11.7 per live births. All deliveries were assisted by skilled health personnel. Special target group was mothers under 20 years old. In terms of **child's health**, underweight among children 6 years old and under increased from 2.2% in 2006 to 2.5% in 2008. Hence, the province sought support in children's milk program from local administrative organizations, and it is expected to reach the MDG* target to reduce underweight among children 6 years old and under to less than 2% by 2011.

The fight against **HIV/AIDS** began to hit a snag. HIV infection among pregnant women declined during 2005-2007, but climbed to 0.89% in 2008. HIV infection among military conscripts also increased slightly. In any case, it is likely to achieve the MDG* target of 0.85% for pregnant women, and 0.40% for military conscripts by 2011.

Prevalence in Malaria and tuberculosis has dropped, but those of heart disease, and coronary artery disease, and dengue fever have increased. Mental illness was also on the rise. This increase was partly due to the expansion of screening of risk groups, and referral for treatment. As for dengue fever, for which Trang set a MDG* target at 50 cases per 100,000 population, the rate was 95.8 in 2008 and 14.0 in 2009. It is difficult to assess the trend as the rate has fluctuated widely during the past decade. But it is clear that the MDG* target on the satisfaction for health services was achieved; clients' satisfaction rate increased from 85% during 2005-2007 to 96.7% in 2008.

Mixed results were recorded for **natural resources and the environment**. Forest area declined from 23.1% of provincial area in 2006 to 22.9% in 2008, due to encroachment into national parks and wildlife sanctuary areas. Mangrove area was maintained. Coral reef and sea grass, which are valuable for tourism and fishery were still in good conditions. The Trang River was reported to be of fair quality. Almost all households within and outside the municipal areas had access to **safe drinking water and good sanitation**. During 2006-2009, municipalities having **standard waste water treatment** increased from 8.3% to 13.3%, but local administrative organizations **having treated municipal waste according to the sanitation standard** dropped from 16.2% to 13.3%.

Table 2.2 Summary of the Assessment on MDGs, MDG+ and MDG* Targets

MDGs, MDG+ and MDG* targets		2008 Assessment		
		Mae Hong Son	Nakhon Phanom	Trang
Goal 1: Eradicate Poverty and Hunger				
MDG 1A	Halve, between 1990 and 2015, the proportion of population living in extreme poverty	Not achieved	Achieved	Achieved
MDG+	*Reduce poverty to less than 4% by 2009*	*Not achieved*	*Not achieved*	*Not achieved*
*MDG**	*Reduce poverty to less than 12% by 2009 (Mae Hong Son)*	*Not achieved*	-	-
*MDG**	*Reduce the proportion of households having less than 20,000 Baht/person/year to less than 4% by 2009 (Nakhon Phanom)*	-	*Achieved*	-
*MDG**	*Increase the growth rate of saving groups and village banks membership to over 20% during 2005-2011 (Trang)*	-	-	*Potentially*
MDG 1C	Halve, between 1990 and 2015, the proportion of population who suffer from hunger	Unlikely	Likely	Likely
*MDG**	*Reduce malnutrition among pre-school and school-aged children to the meet the national standard by 2009 (Nakhon Phanom)*	-	*Likely*	-
*MDG**	*Reduce underweight among under-five year old children to less than 2% by 2011 (Trang)*	-	-	*Likely*
*MDG**	*Reduce food contamination by 2015 (Trang)*	-	-	*Likely*
Goal 2: Achieve Universal Primary Education				
MDG 2A	Ensure that, by 2015, boys and girls alike, will be able to complete a full course of primary schooling	Likely	Likely	Likely
MDG+	*Universal lower secondary education by 2006*	*Not achieved*	*Not achieved*	*Not achieved*
*MDG**	*90% lower secondary education by 2009 (Mae Hong Son)*	*Achieved*	-	-
MDG+	*Universal upper secondary education by 2015*	*Potentially*	*Potentially*	*Potentially*
*MDG**	*70% upper secondary education by 2015 (Mae Hong Son)*	*Likely*	-	-
*MDG**	*Reduce drop-out rate for lower and secondary education to 2.41% by 2009 (Nakhon Phanom)*	-	*Likely*	-
*MDG**	*95% tertiary education among the youth by 2011 (Trang)*	-	-	*Potentially*
*MDG**	*Expanded education for the workforce and those who lacked education opportunities (Trang)*	-	-	*Not achieved*
*MDG**	*Increase the proportion of schools assessed to have "good" quality standard during 2006-2011 (Trang)*	-	-	*Likely*

MDGs, MDG+ and MDG* targets		2008 Assessment		
		Mae Hong Son	Nakhon Phanom	Trang
Goal 3: Promote Gender Equality and Empower Women				
MDG 3A	Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	Achieved	Achieved	Achieved
*MDG**	*Increase the share of women in executive positions in local administrative organizations to 10% by 2009 (Nakhon Phanom)*	-	*Likely*	-
*MDG**	*Increase the share of women in executive positions in local administrative organizations to 4% by 2015 (Trang)*	-	-	*Likely*
Goal 4: Reduce Child Mortality				
MDG+	*Reduce infant mortality rate to 15 per 1,000 live births by 2006*	*Achieved*	*Achieved*	*Achieved*
*MDG**	*Halve under-five mortality rate in highland areas during 2005-2015 (Mae Hong Son)*	*No data*	-	-
*MDG**	*Reduce new-born weighing less than 2,500 grams to less than 7% by 2009 (Nakhon Phanom)*	-	*Likely*	-
Goal 5: Improve Maternal Health				
MDG+	*Reduce maternal mortality ratio to 18 per 100,000 live births by 2006*	*Not achieved*	*Not achieved*	*Achieved*
*MDG**	*Halve maternal mortality ratio in highland areas during 2005-2015 (Mae Hong Son)*	*Potentially*	-	-
*MDG**	*Reduce maternal mortality ratio to 18 per 100,000 live births by 2009 (Nakhon Phanom)*	-	*Achieved*	-
*MDG**	*Reduce maternal mortality ratio to 15 per 100,000 by 2011 (Trang)*	-	-	*Achieved*
*MDG**	*Reduce anemia among pregnant women to less than 10% by 2011 (Trang)*	-	-	*Likely*
Goal 6: Combat HIV/AIDS, Malaria and Other Diseases				
MDG 6A	Have halted by 2015 and begun to reverse the spread of HIV/AIDS	Likely	Likely	Likely
MDG+	*Reduce HIV prevalence among reproductive adults to 1 percent by 2006*	*Achieved*	*Achieved*	*Achieved*
*MDG**	*Reduce HIV prevalence among pregnant women and military conscripts to less than 0.85% and 0.40% by 2011 (Trang)*	-	-	*Likely*
MDG 6C	Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	Malaria – Achieved TB, heart, dengue fever, hypertension, diabetes – Not achieved	Malaria - Achieved TB, heart, dengue fever - potentially	Malaria - Achieved TB, health, heart and CAD, dengue fever - potentially

MDGs, MDG+ and MDG* targets		2008 Assessment		
		Mae Hong Son	Nakhon Phanom	Trang
*MDG**	*Reduce Malaria incidence to 1.4 per 1,000 by 2006 (Mae Hong Son)*	*Not achieved*	-	-
*MDG**	*Increase DOT success rate to more than 85% by 2009 (Nakhon Phanom)*	-	*Achieved*	-
Goal 7: Ensure Environmental Sustainability				
MDG 7A	Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	Likely	Likely	Likely
*MDG**	*Increase the share of municipal waste recycled to 30% by 2006*	*Not achieved*	*Not achieved*	*No data*
MDG 7C	Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	Achieved	Achieved	Achieved
*MDG**	*Improve the quality of life in the communities (Mae Hong Son)*	*Potentially*	-	-
*MDG**	*Improve the quality of life in urban communities by 2009 (Nakhon Phanom)*	-	*Potentially*	-

SECTION 3

Progress by Goal and Target

Goal 1: Eradicate Poverty and Hunger

MDG 1A	**Halve, between 1990 and 2015, the proportion of population living in extreme poverty**	**Achieved**
MDG+	***Reduce poverty incidence to 4 percent by 2009***	***Not achieved***

Table 3.1 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. Poverty incidence (%)	33.69	18.98 (1994)	20.98	11.16 (2004)	8.95	16.84 (2015)	4.00 (2009)
2. Poverty gap	8.05	3.92 (1994)	4.24	2.01 (2004)	1.49	-	-
3. Share of income by the poorest quintile (%)	6.00	6.05 (1994)	6.13	6.17 (2004)	6.64	-	-

Data Source: Office of the National Economic and Social Development Board. Calculated from data from the Household Socio-economic Survey by the National Statistical Office.

Table 3.2 MDG+ indicators

MDG+ indicators	2002	2003	2004	2005	2006	2007	2008	MDG+ target
1. Poverty incidence in the Northeast (%)	23.06	-	18.58	-	16.77	13.05	14.62	-
2. Poverty incidence in Yala Province (%)	15.21	-	7.76	-	6.71	7.53	7.11	-
3. Poverty incidence in Pattani Province (%)	21.09	-	20.54	-	16.31	19.72	20.68	-
4. Poverty incidence in Narathiwat Province (%)	42.25	-	14.78	-	27.05	20.02	12.83	-
5. Poverty severity	0.81	-	0.56	-	0.53	0.41	0.41	-

Data source: Office of the National Economic and Social Development Board. Calculated from data from the Household Socio-economic Survey by the National Statistical Office.

Progress Report

Thailand has met the MDGs target of halving poverty between 1990-2015. But poverty incidence remains high in the Northeast, the North, and the deep South, as well as among the elderly, children and farm workers, which should be priority targets in future poverty eradication programs.

Poverty headcount and poverty incidence

Thailand measures absolute poverty by poverty line.[2] Starting in 2004, the poverty line has shifted from income-based to expenditures-based. This brings about a new poverty data series. The new data series also shows that ***poverty incidence*** has declined rapidly from 33.69% in 1990 to 14.75% in 1996. After a brief spiral to 20.98% in 2000 amid the economic crisis, further reduction continued due to several policy measures. In 2007, poverty incidence was 8.48% or 5.4 million people. In 2008, political and economic crises led to an increase in poverty to 8.95% or 5.8 million people.

Since 2000, all regions have shown continuous progress. Poverty incidence was highest in the Northeast at 14.62%. Poverty profile remained unchanged; the poor were largely farmers, farm workers, and general labor, with little education and large household. It has also become evident that the elderly and children are the poorest of the poor; poverty incidence among the elderly and children were 14.1% and 11.18%, respectively.

Table 3.3 Poverty Indicators, 1990-2008

Poverty Indicators	1990	1992	1994	1996	1998	2000	2002	2004	2006	2007	2008
Poverty line (Baht/person/month)	692	790	868	953	1,130	1,135	1,190	1,242	1,386	1,443	1,579
Poverty incidence (%)	33.69	28.43	18.98	14.75	17.46	20.98	14.93	11.16	9.55	8.48	8.95
Poverty headcount (millions)	18.40	15.80	10.70	8.50	10.20	12.60	9.10	7.00	6.10	5.40	5.80

Data source: Office of the National Economic and Social Development Board. Calculated from data from the Household Socio-economic Survey by the National Statistical Office.

Box 3.1 Thailand's Poverty Profile in 2008

Thailand's Poverty Profile in 2008

Poverty is manifested by lack of income, rights, and access to public services and resources.

- 5.2 million or 90% of the poor were in the rural area.
- 4 out of 7 of the poor lived in the Northeast.
- 1 in 7 of the population in the Northeast was poor, compared with 1 in 130 in Bangkok.
- 45.34% of the poor were skilled agricultural and fishery workers.
- 86% of the poor had primary education or less.
- 41.87% of the poor lived in 5-or-more-person households.
- 28.79% of the poor were children, 22.71% were the elderly.

[2] Thailand's poverty line is calculated from expenditures incurred to individuals for obtaining food and non-food items necessary for living subsistence, which vary depending on difference in age-groups, consumption behaviors, and commodity prices in urban and rural areas in different regions. People having expenditures lower than the poverty line are considered "poor".

Table 3.4 Poor Population by Household's Socio-economic Status and by Region, 2008

Household's Socio-economic Status	Poverty Incidence (%)					
	BKK	Central	North	Northeast	South	Total
Legislators, senior officials and managers	0.20	2.06	5.51	2.05	0.96	2.28
Professionals	-	0.07	0.89	-	0.87	0.26
Technicians and associate professionals	-	0.07	2.73	0.21	0.81	0.44
Clerks	0.20	0.43	0.54	1.14	-	0.47
Service workers, shop and market sales workers	0.41	1.32	3.02	3.03	1.51	1.94
Skilled agricultural and fishery workers	-	4.44	16.86	18.34	4.38	14.16
Craft and related trades workers	1.03	2.21	9.67	11.21	4.87	6.21
Plants and machine operators and assemblers	0.51	0.35	3.88	5.90	2.48	1.82
Elementary occupations	1.37	6.64	19.12	17.93	5.39	12.25
Workers not classifiable by occupations	0.62	3.39	14.61	15.57	5.61	9.23
Total	**0.55**	**2.76**	**12.61**	**14.03**	**3.89**	**8.29**

Remarks: Data on socio-economic status include only population 15 years and over. The poverty incidences were therefore lower than those of total population.

Data source: Office of the National Economic and Social Development Board. Calculated from data from the Household Socio-economic Survey 2008 by the National Statistical Office.

Poverty in the Northeast, the North, and the Deep South

In the past 18 years, poverty dropped rapidly in the Northeast and the North. It dropped faster in the Northeast from 35.34% in 2000 to 14.62% in 2008, compared with 23.10% to 13.26% in the North during the same period. The focus on these two regions had an immense impact on overall poverty reduction. Another priority area is the deep South where poverty incidence almost doubled the national average. Violence in the area made the livelihood more difficult, worsening the poverty situation.

Poverty Reduction Policy and Resources

The Royal Thai Government has adopted H.M. the King's Sufficiency Economy Concept as the national development and poverty reduction approach. Key strategies are reducing expenditures, increasing income, expanding opportunities and strengthening the capacity of the poor, as well as empowering the community for self-reliance. An important measure is to support the poor and the disadvantaged to have more access to occupational fund, education, housing, healthcare and social security. In fiscal year 2008, poverty reduction budget accounted for 15.1% of total government budget.

As a large part of the poor are in the farm sector, policies and measures concerning the agricultural sector and agricultural products, e.g. farm price stabilization, commodity mortgage scheme recently replaced by the farmer's income guarantee system, do have significant implications on poverty situation.

Box 3.2 Examples of Poverty Reduction Programs/Projects

Examples of Poverty Reduction Programs/Projects
Village/Urban Community Fund
Every village and urban community received 1 million Baht revolving fund to be distributed to members as occupational loans. The fund was managed by a committee appointed by the villagers. The present Government injected more fund into the scheme and encouraged the village funds to register as juristic entities in line with a policy to convert non-institutional to institutional loans. The allocation depends on the size of the membership.
Sufficiency Economy for Community Development
Villages and communities received budget allocation according to the population size to support community development activities in accordance with the Sufficiency Economy concept.
Community Welfare Fund
It started as community's savings schemes that also provided some welfare regarding education, orphans, medical expenses, old-aged, disability, etc. to members. At present, there are 3,154 funds at sub-district level, involving 1 million members and 617.7 million baht capital. Today, the Government and local administrative organizations agreed to support the schemes at the ratio of 1:1:1 baht/day (Government, local administrative organization, member). In 2010, 727 million baht was allocated to existing funds. In 2011, the target is to set up additional 2,000 funds in 2,400 community/sub-districts, involving 7,400 communities. Next step is to establish a national community welfare fund.
One Tambon-One Product and Community Enterprise
Collaboration between the Government, the private sector, and the communities to upgrade the quality of community products with an aim to expanding the production and marketing and to become small and medium enterprises.
Universal Health Care
UHC expands health services free of charge to those who do not benefit from other schemes.
Old-aged, disability, AIDS allowance
The Government provided 500 Baht monthly allowance to destitute elderly, disabled, and people living with AIDS. In 2009, the allowance was extended to all the elderly.
Non-institutional debt
The Government attempts to reduce the people's debt burden by having non-institutional loans converted into institutional loans. In 2009, about 1 million debtors with over 100,000 million baht registered for the scheme. In 2010, the Government gave green light to state financial institutes to refinance non-institutional loans for approximately 400,000 debtors.

The fight against poverty also includes mitigating the impacts of the global economic crises especially on the poor. Recent measures included an occupational and retraining program for laid-off workers and newly graduates which also paid 4,800 Baht/month for 3 months as start-up fund to those who had completed the training and returned to their hometown to start a business, a 15-year free schooling project to reduce education expenditures (in addition to free tuition), cash handout to low-income wage earners, pay rise for Sub-district chiefs, village headmen, and civil servants. Free ride on bus and third class

train, and reduced utility bills are also part of the package.

Challenges

Although the MDG+ target to reduce poverty to 4% by 2009 was not met, Thailand will continue to intensify the poverty reduction effort. Poverty incidence in the North is added as a MDG+ indicator. Key poverty reduction strategies are as follow.

1. ***Promote the concept of Sufficiency Economy, sufficient livelihood, and the self reliance, interdependence, and community share and care life style.*** Development partners should be encouraged to share the knowledge and experiences for skills and career development. Household savings should be promoted to increase economic security and mitigate the impacts of rising cost of living.

2. ***Support communities and local administrative organizations to play a major role in poverty reduction***, especially the provision of protection and care for the disadvantaged. Provincial and district authorities should have an important role in integrating development activities by coordinating centrally-driven initiatives and locally-driven activities, and promoting the private sector and the communities to bring together their knowledge to create income opportunities.

3. ***Develop social protection systems*** by expanding social security to those in the informal sector, strengthening community welfare/protection schemes such as savings groups, credit union groups to serve as social protection networks throughout the country.

4. ***Differentiate between urban poverty and rural poverty and adopt different policy measures to promote career development and improve quality of life.*** To reduce rural poverty, price stabilization for agricultural inputs and farm produces, and reduction of agricultural debts are top priorities. In the urban area, employment and inflation are critical issues. As a large part of urban debts are for consumption and home-purchasing, housing security is another important measure.

5. ***Allocate additional budget to poverty-stricken areas and target groups*** especially the Northeast and the North, and the three southernmost provinces. Special budgets should also be earmarked for small-scale farmers, farm workers, children and the elderly especially those in large households, to ensure that they have access to social services.

6. ***Increase the effectiveness of poverty targeting.*** An important technique is the regional poverty map, with special emphasis on the Northeast, the North, and the deep South. A list of poor population, poor households will help identify the target groups for poverty reduction, social protection, social service programs and projects.

MDG 1B	Achieve full and productive employment and decent work for all, including women and young people	Potentially

Table 3.5 MDGs indicators

MDG indicators	2004	2005	2006	2007	2008	MDG target	MDG+ target
1. Growth rate of GDP per capita (%)	3.09	4.01	3.28	0.40	2.27	-	-
2. Employment-to-population ratio (%)	53.36	54.15	54.67	55.14	55.81	-	-
3. Proportion of employed persons under the poverty line (%)	11.17	-	9.00	8.10	8.63	-	-
4. Proportion of own-account and contributing family workers in total employment (%)	51.26	50.64	51.71	51.71	52.20	-	-

Data sources:
1. National Accounts Office, Office of the National Economic and Social Development Board
2. National Statistical Office, Labor Force Survey
3. Social Database and Indicators Office, Office of the National Economic and Social Development Board
4. National Statistical Office, Household Socio-economic Survey

Progress Report

Thailand has a potential to achieve the target of full, productive and decent employment. Employment-to-population ratio has steadily increased, while the proportion of employed persons under the poverty line has dropped. But overall labor productivity that had increased in the first half of the decade took a drastic dip since 2006. Low education level represents a major constraint, resulting in low labor productivity, low wage and income.

Labor productivity varies widely across sectors. Agriculture which accommodates the largest part of the workforce has the lowest level of labor productivity, contributing to poverty in the farm sector. Majorities of the workforce are in the informal sector and receive little benefit from social security and welfare.

The workforce and labor productivity

Employment-to-population ratio has been on the rise since 1970, but is expected to start a downward trend in 2010 as Thailand is entering an ageing society.

Labor productivity has increased in step with the GDP. In 2001, growth rate of GDP per capita employed was 95,785 baht/person/year, increased to 118,184 baht/person/year in 2008, at an average annual growth rate of 3.06%, thanks to investment in production technology, higher educational achievement which enables workers to make adjustment to new technology and production process and become more efficient. Nonetheless, Thai labor productivity has increased at a slower rate than several other countries in the region.

Labor productivity in agriculture and construction is lower than those of other sectors. In 2008 the national average was 4.53 times more than that of the agricultural sector, and 2.75 times more than that of the construction sector. As a consequence, return to labor was low, and poverty incidence was highest and second highest in agriculture and construction, respectively.

Table 3.6 Growth of labor productivity in Southeast Asia

Country	Growth of labor productivity (Constant 1990 US$ PPP)	
	1992	2006
Brunei	3.2	1.4
Cambodia	4.9	6.4
Indonesia	2.9	3.9
Laos	3.8	4.2
Malaysia	6.5	3.2
Myanmar	2.5	5.5
Philippines	-4.6	2.0
Singapore	2.0	6.3
Thailand	7.4	3.9
Vietnam	4.1	5.7

Data source: Asian Development Bank, Key Indicators for Asia and the Pacific 2009

Table 3.7 Labor productivity by industry

Industry	2001	2003	2005	2007	2008
Agriculture, hunting and forestry	14.05	-2.48	0.46	0.38	1.38
Fishing	18.21	-1.70	8.73	0.59	5.61
Mining and quarrying	2.38	-2.93	2.19	-5.20	9.56
Manufacturing	5.56	3.05	7.47	4.09	7.11
Electricity, gas and water supply	-2.36	-1.11	5.07	9.99	-0.64
Construction	-2.38	3.22	3.52	2.57	-8.09
Wholesale and retail trade, repair of motor vehicles, motorcycles, and personal and household goods	-2.10	4.52	4.31	3.84	-1.67
Hotel and restaurants	-8.83	-1.90	14.70	1.32	0.04
Transport, storage and communication	-1.13	4.09	9.73	7.40	-5.68
Financial intermediation	10.18	1.50	-3.83	5.06	-1.97
Real estate, renting and business activities	-5.92	1.50	1.54	-3.14	0.39
Public administration and defense, compulsory social security	5.12	-6.85	-4.80	-4.58	-2.41
Education	-0.79	5.72	3.39	9.53	-2.93
Health and social work	-11.34	0.94	7.29	-1.07	-7.68
Other community, social and personal service activities	2.61	4.64	1.90	-5.90	-8.58
Employed persons in private households	-6.19	-0.01	6.54	-1.77	9.04
Total	**4.67**	**3.04**	**3.88**	**3.30**	**0.34**

Data Sources: 1. National Statistical Office, Labor Force Survey
2. National Accounts Office, Office of the National Economic and Social Development Board

Poverty in the workforce

Proportion of employed persons under the poverty line had dropped, but slightly increased in 2008 due to the impact of the economic crisis. It should be noted that poverty incidence among the employed is very close to that among the general population. This shows that despite increasing labor productivity and continued economic expansion, real purchasing power of the employed increased only marginally.

Quality of the workforce

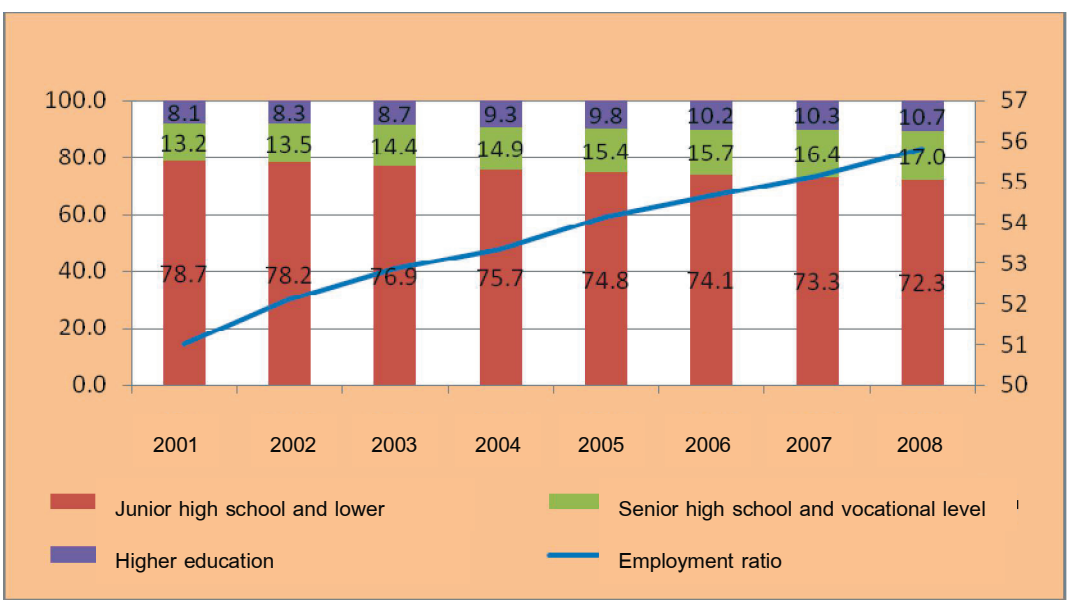
The workforce had little education. Over 70% had less than lower secondary education. Education level is directly related to efficiency, capacity to make adjustment, and wages. In 2008, agricultural labor had only 5.95 years of schooling, the lowest level compared with 8.07 years for industrial labor and 9.80 years for service labor. With low education attainment, the agricultural labor had low labor productivity, and highest poverty incidence.

Table 3.8 Employed persons under the poverty line by industry

Industry	2004	2006	2007	2008
Agriculture	**18.02**	**14.98**	**13.87**	**14.81**
Agriculture, hunting and forestry	18.17	15.10	14.05	15.00
Fishing	11.20	9.56	4.98	6.42
Non-agriculture	**3.60**	**3.00**	**2.81**	**3.06**
Mining and quarrying	6.21	3.91	-	-
Manufacturing	4.11	3.50	3.07	4.02
Electricity, gas and water supply	0.53	1.80	5.95	1.95
Construction	9.10	8.20	8.25	7.48
Wholesale and retail trade, repair of motor vehicles, motorcycles, and personal and household goods	3.35	2.60	2.30	2.65
Hotel and restaurants	2.06	1.74	1.74	1.92
Transport, storage and communication	2.31	1.42	1.16	1.93
Financial intermediation	0.72	0.48	0.29	0.01
Real estate, renting and business activities	1.95	0.99	1.16	0.50
Public administration and defense, compulsory social security	1.41	1.51	0.84	0.96
Education	0.77	0.16	0.50	0.45
Health and social work	1.58	1.55	2.41	0.41
Other community, social and personal service activities	5.11	4.20	4.98	3.37
Employed persons in private households	6.61	4.52	1.96	7.00

Data source: Social Database and Indicators Office, Office of the National Economic and Social Development Board

Figure 3.1 Educational Attainment of Thai Labor



Workers in the informal sector

In 2001, ***the proportion of own-account and contributing family workers in total employment*** was 53.79%, consisting of 31.45% own-account workers and 22.34% contributing family workers. This proportion slightly dropped to 52.2% in 2008. 10.73% of own-account workers and 11.89% of contributing family workers found themselves under the poverty line.

Over 70% of workers in these two groups were in agriculture, wholesale and retail trading. In agriculture, poverty incidence among own-account workers was very high at 18.09%, as most were small-scale farm holders that faced fluctuation in production and income. Poverty incidence among unpaid family workers in the agricultural sector was also high at 18.34%. A large part of workers in these two groups were covered by the Universal Healthcare; only 12.43% had social security. Hence, most of them were in the informal sector with little protection.

Table 3.9 Poverty incidence by work status

Work status	2004	2006	2007	2008
Employers	9.72	4.03	2.35	3.44
Own-account workers (with no employee)	10.94	10.83	9.85	10.73
Unpaid family workers	15.45	13.25	12.19	11.89
Government employees	1.72	1.29	1.02	0.73
State enterprise employees	-	0.13	0.44	0.35
Private sector employees	8.09	4.92	4.47	5.05
Cooperatives	-	16.72	9.35	9.92

Data source: National Statistical Office. Data processed by the Social Database and Indicators Office, NESDB.

Challenges

Immediate challenges concern the upgrading of labor quality and productivity and the expansion of protection to workers in the formal and informal sectors to minimize risks from fluctuating economic and social situations, internally and externally. The focus will be on the followings.

1. ***Upgrade labor productivity especially among farm and unskilled workers*** by expanding all kinds of education, including basic education, occupational training, skills training, and life-long learning to all population groups. This is a key to capacity development, which would expand the chances and choices of occupation, thereby enabling the workforce to have better income and quality of life, which is equivalent to sustainable poverty eradication. At present, the Government's "Strengthening Thailand" program includes upgrading public libraries and establishing educational science centers, producing educational radio and television programs and other projects to promote reading and learning, expanding ICT infrastructure, adding more computers, plus other investments in science and mathematics education, R&D in education and development community-based learning centers.

2. ***Ensure income security and reduce the risks of small-scale farm holders.*** This is an important strategy to reduce high poverty incidence in the agricultural sector. To avoid incurring excessive fiscal burden, priority should be given to the poor and the disadvantages.

3. ***Expand social protection to cover workers in the informal sector*****,** especially those with low income and are vulnerable to economic risks. In the long run, local administrations and communities should play an important role in policy development and the provision of social welfare in line with the decentralization policy.

MDG 1C	Halve, between 1990 and 2015, the proportion of people who suffer from hunger	Achieved

Table 3.10 MDGs Indicators

MDG Indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. Population with expenditures below food poverty line (%)	2.44	1.06 (1994)	1.76	0.62 (2004)	0.80	1.22 (2015)	-
2. Underweight children under five years old (%)	41.68* (1986)	31.30*	-	11.30** (2003)	-	-	-

Data sources:
1. Office of the National Economic and Social Development Board. Calculated from data from the Household Socio-economic Survey by the National Statistical Office.
2. Division of Nutrition, Department of Health, Food and Nutrition Survey, 3rd round (1986), 4th round (1995), 5th round (2003)

* based on national growth standard 1976.
**based on national growth standard 1995, disseminated in 2000.

Table 3.11 MDG+ Indicators

MDG+ Indicators	2002	2003	2004	2005	2006	2007	2008	MDG+ target
1. Underweight population over 20 years old and over (by BMI) %)	25.00* (1995)	-	10.10** (2003)	-	-	-	-	-
2. Underweight hill tribe children (%)	36.00 (2001)	-	37.50	-	26.80	-	-	-
3. Households using iodized salt (%)	-	-	-	-	-	83.50	85.40	-
4. Iodine deficiency among pregnant women (%)	71.40	65.40	74.90	-	57.40	46.90	58.50	-
5. Children 6-14 years old with iron deficiency (%)	-	30.56	-	-	-	-	-	-

Data sources:
1, 5 Division of Nutrition, Department of Health, Food and Nutrition Survey, 4th round (1995), 5th round (2003)
2. Bureau of Health Policy and Strategy, Office of Permanent Secretary, Ministry of Public Health
3. Division of Nutrition, Department of Health, e-inspection report from 75 provinces.
4. International Council for the Control of Iodine Deficiency Disorder, External Expert's Review of the Project to Elimiate Iodine Deficiency in Thailand, 2009. (For 2002-2007, this referred to pregnant women with urine containing less than 100 micrograms/litre. For 2008, the threshold was raised to less than 150 micrograms/litres).

* BMI <20 kg./m^2 **BMI <18.5 kg./m^2

Progress Report

Thailand has achieved the MDG target to reduce population suffering from hunger by half. But nutrition situation varies among population groups. Some children and population groups including hill tribe children on highlands are underweighted. But a more common problem among children and adults is overweight. At the same time, a number of children are too short for their age (stunted) which indicates a problem of chronic malnutrition.

Nutrition situation among the general population

Proportion of population under the food poverty line was 2.44% in 1990. It dropped to 1.06% in 2004, increased to 1.76% during the economic crisis, and dropped to 0.80% in 2008. The success far exceeded the MDG target.

The Food and Nutrition Survey, 5th round in 2003, also showed that ***proportion of population 20 years and over that were underweight*** (measured by Body Mass Index - BMI) was 20.1%, representing an improvement from 25% in 1995. However, it should be noted that the 1995 BMI growth standard was <20 kilograms per sq.m. in 1995, but <18.5 kilograms per sq.m. in 2003.

Meanwhile, more Thais have become overweight. The Ministry of Public Health's data show that during the past decade the proportion of overweight population rose from 15% to 22% in 2004. Measured by BMI, 25% of population 35 years and over were overweight.

In 2007, the Department of Health conducted an obesity survey among the population 15 years and over and found that 24% of men and 60.5% of women were obese (waistline exceeding 90 cm. for men and 80 cm. for women). In 2008, the proportion rose to 33.5% for men but dropped to 58.2% among women.

Child's nutrition

Based on data from the Food and Nutrition Surveys by the Department of Health, and the national growth standard developed in 1976, the proportion of ***underweight children under five years old*** dropped from 41.68% in 1986 to 31.3% and 29.1% in 1995 and 2003 respectively. On the new national growth standard developed in 1995 by the Department of Nutrition to be in line with the international standard (disseminated in 2000), the proportion of underweight children under five years old in 2003 was 11.3%, which was close to 9% reported by another survey - the Monitoring the Situation of Children and Women: Thailand Multiple Indicator Cluster Survey (MICS) conducted by several Thai governmental agencies in cooperation with UNICEF in 2006.

Under-nutrition still persists among ***hill tribe children on highland areas***. Data from the Survey of Quality of Life and Community Environment on Highland Areas in 2001 showed that 36.0% of hill tribe children were underweight. The Survey of Health Conditions of Hill Tribe People in 2004 recorded 37.5% Both surveys used the 1976 national growth standard. In 2006, another survey using the 1995 national growth standard found that 26.8% of hill tribe children were underweight. At present, there are nutrition projects specially designed for hill tribe children, e.g. a project to enhance maternal and child's health in remote areas initiated by The HRH. Crown Princess Maha Chakri Sirindhorn. Sub-district Administrative Organizations also play an increasing role in promoting child's health, e.g. by providing lunch and milk to day care centers.

Thyroid size palpation had been used as indicator for ***iodine deficiency*** among school-aged children. According to the WHO, the deficiency incidence should not exceed 5%. After Thailand introduced quality iodized salt to the general public by supporting local administrative organizations and health networks to promote the use of iodized salt in various products including drinking water in remote areas, ***iodine deficiency shown by thyroid size palpation in school-aged children*** declined from 2.1% in 2000 to 0.69% in 2004. At this level, thyroid size palpation is no longer a sensitive indicator for iodine deficiency. Hence, the Department of Health adopted a new indicator – ***percentage of households using iodized salt*** – to detect iodine deficiency. According to the WHO, at 90% coverage, it is safe to assume that people would not suffer from iodine deficiency. According to MICS, only 55% of the households used iodized salt in 2006; with higher rate among urban households. The program was intensified, resulting in 83.5% coverage in 2007, and 85.4% in 2008. In addition, Department of Health has given priority to combating ***iodine deficiency among pregnant women*** which resulted in a drop from 71.4% in 2002 to 58.5% in 2008.

The Food and Nutrition Survey uses Fasting Capillary Blood Glucose (FCG) to determine Hematocrit. In 1986, amenia among school-aged children was high at 51%, largely as a result of ***iron deficiency***. It dropped to 20.5% and 30.56% in 1995 and 2003, respectively. Government agencies concerned are collaborating to further increase iodine and iron level through the national health security system.

Thai children also face ***obesity*** threat. Overweight has a lasting impact; 3 out of 4 overweight adolescents stay overweight when they become adult. The Food and Nutrition Survey in 1995 found that 20% of children aged 6–14 were overweight. This proportion dropped to 13.6 for both urban and rural areas in 2003**.** Main causes of obesity are unhealthy diet, e.g. excessive consumption of high calories food like flour, sugar and fat, inadequate consumption of vegetable and fruit, and lack of exercise.

The MICs 2006 reported the overweight problem among 10% of urban children, and 6% of rural children. A new type of malnutrition was also reported; 12% of children under five years old were too short for their age (stunted) which indicated the state of chronic under-nutrition that could have an enduring effect on physical and mental health, intellect, learning capacity, mature development, work efficiency. There is also a risk of non-communicable diseases at later ages such as obesity, diabetes, hypertension, heart disease.

Challenges

Nutrition problems in Thailand are diverse and dynamic. At present, the share of children in the population is dropping fast, which makes child development increasingly significant. Government agencies concerned have integrated child development strategy with maternal and child development, as demonstrated by projects such as Family Love Bonding Project. Further development should have the following focuses.

1. ***Develop an integrated policy with an emphasis on vulnerable groups in each area,*** e.g. ethnic minorities (hill tribe, sea gypsies), disadvantaged children, e.g. children in slums, homeless children. Such approach is necessary for concrete measures and effective collaboration among various government agencies.

2. ***Conduct a health examination nutrition survey that covers all age-groups and areas*** every five years.

3. ***Promote healthy behaviors by way of public communication, and enhance the capacity of local and community organizations*** in assessing and monitoring basic household health situation in the areas.

Goal 2: Achieve Universal Primary Education

MDG 2A	**Ensure that, by 2015,boys and girls alike, will be able to complete a full course of primary schooling**	**Achieved**
MDG+	***Achieve universal lower secondary education by 2006***	***Not achieved***
MDG+	***Achieve universal upper secondary education by 2015***	***Unlikely***

Table 3.12 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	MDG target
1. Net enrolment in primary education (%)	70.10 (1992)	77.10 (1996)	80.40 (1998)	-	-	100 (2015)
2. Gross enrolment in primary education (%)	99.20 (1992)	103.40	103.20	104.20	104.80	
3. Retention rate in primary education (%)	-	85.90	87.10	90.40	-	-
4. Literacy rate of women 15-24 years old (%)	97.90	98.50 (1994)	97.90	97.90	-	-
5. Literacy rate of men 15-24 years old (%)	98.60	98.70 (1994)	98.10	98.20	-	-

Data sources:
1-3. ICT Center, Office of Permanent Secretary, Ministry of Education
4-5. National Statistical Office, Population and Housing Census 1990, 2000; Literacy Survey 1994; Survey of Population Change 2005

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Since 1995, ***gross enrolment in primary education*** has exceeded 100% due to overaged, underaged, repeating students. Retention rate was also high at 88.4% in 2002. Hence, it is concluded that Thailand has achieved the MDG target of universal primary education.

Gross enrolment in lower secondary education in 2006 was 96.7%, while retention rate reached 74.4% in 2005. The MDG+ target of universal secondary education by 2006 was considered unmet. Subsequent data also show that the enrolment rate has remained at the same level until now.

Gross enrolment in upper secondary education in 2008 was 68.1%, while the retention rate was only 52.8%. This means ***universal upper secondary education by 2015 is still a very challenging MDG+ target.***

Retention rate at each education level indicates the efficiency of the education system in supporting the children to stay in school until they complete the education. 88.4% of grade 1 students in 1997 academic year completed grade 6, while 74.4% and 52.8% continued on to finish grade 9, and grade 12, respectively. Hence, only about half of the students managed to stay in the system throughout the 12-year basic education.

Table 3.13 MDG+ indicators

MDG+ indicators	2002	2003	2004	2005	2006	2007	2008	MDG+ target
1. Net enrolment in lower secondary education (%)	-	69.20	79.10	-	-	-	-	100 (2549)
2. Gross enrolment in lower secondary education (%)	82.20	84.00	92.50	95.50	96.70	96.40	95.60	
3. Retention rate in lower secondary education (%)	-	-	74.60	74.40	-	-	-	-
4. Net enrolment in upper secondary education (%)	34.30	34.60	37.00	40.20	-	-	-	100 (2558)
5. Gross enrolment in upper secondary education (%)	54.80	58.70	63.80	63.80	65.80	67.20	68.10	
6. Retention rate in upper secondary education (%)	42.30	-	-	-	-	51.10	52.80	-
7. Students' average test score in primary education (%)	-	-	-	-	See table 3.15		-	-
8. Students' average test score in lower secondary education (%)	-	-	-	-	See table 3.15		-	-
9. Students' average test score in upper secondary education (%)	-	-	-	See table 3.15			-	-
10. Computer literacy of population 15-24 years old (%)	-	-	49.20	48.90	50.40	51.80	54.70	-
11. Internet literacy of population 15-24 years old (%)	-	-	32.10	31.30	36.50	39.70	44.60	-

Data sources:
1-9. ICT Center, Office of Permanent Secretary, Ministry of Education
10. National Statistical Office, ICT Survey (Household)

Table 3.14 Retention Rates, Academic Years 1997-2008

Education Level	Academic Year	Number of Students	Retention Rate (%)
Grade 1	1997	1,108,862	100.00
Grade 6 (Completed primary level)	2002	980,486	88.40
Grade 9 (Completed lower secondary level)	2005	869,801	74.40
Grade 12 (Completed upper secondary level)	2008	585,058	52.80

Data source: ICT Center, Office of the Permanent Secretary, Ministry of Education

Although Thailand managed to expand education opportunities very rapidly, not a small number of children are still at disadvantage, e.g. the poor, the disabled, those who are physically or mentally impaired, and ethnic minorities. In 2008, the Ministry of Education provided education to 2.7 million disadvantaged people. These were 2.5 million poor students, 41,596 poor students who lived in remote areas, 190 child workers, 58 children in sex industry, 88,295 abandoned children, 299 children in probation centers, 1,840 homeless children, 8,775 children affected by AIDS, 42,858 (hill tribe) ethnic minorities, 1,750 children who were victims of torture and other types of violence, 775 drug addict children, and 35,421 children with other problems, 45,392 disabled.

Quality of education is a shared concern among many societal groups. Since 2001, education achievement at all levels has been on decline. The 2007 test scores showed dismal results. Only in Thai that the students' average score was higher than 50%. In other subjects, especially English, mathematics, and science, students had very low scores, which indicated the poor quality of education. This problem needs to be urgently addressed.

Box 3.3 Expansion of Education Opportunities

Expansion of Education Opportunities

15 Years of Free Education

Since 1997, the Constitution mandates that all Thai citizens have the rights to free 12-year basic education. But it was estimated that about 3 million improvised students lacked uniform, stationery, and lunch. In academic year 2009, the Government introduced a project to provide 15 years of free education (from kindergarten to grade 12) that covered both regular and vocational education. Textbooks were provided at the schools. School uniform, stationery, educational materials, and student development activities were given free of charge to every student. The project covered 12 million students, 11 million in formal education and 1 million in informal education. The budget was 18,000 million baht for the first semester of 2009 academic year.

Education Loan Fund

The Education Loan Fund started in 1996. In 2009, the Fund received 25,700 million baht from the national budget and 11,000 million baht extra-budgetary resource to expand its operation, and was able to extend loans to 353,000 students. The repayment period was also extended from 15 to 20 years.

Table 3.15 Primary and Secondary Students' Average Test Scores, Academic Years 2003-2008

Grade/Subject	Average Score (%) Academic Year					
	2003	2004	2005	2006	2007	2008
Grade 3						
Thai	n.a.*	n.a. *	n.a.*	n.a. *	47.88	51.60
Mathematics	n.a.*	n.a. *	n.a.*	n.a. *	44.69	48.39
Science	n.a.*	n.a. *	n.a.*	n.a. *	n.a. *	47.91
Grade 6						
Thai	45.26	44.23	n.a.*	42.74	36.58	42.02
Mathematics	41.70	43.77	n.a.*	38.87	47.55	43.76
English	41.14	37.34	n.a.*	34.51	38.67	37.77
Science	42.14	41.60	n.a.*	43.17	49.57	51.68
Thinking skills	n.a.*	n.a.*	n.a.*	n.a.*	n.a.*	37.52
Grade 9						
Thai	53.98	38.29	n.a.*	43.94	48.05	41.04
Mathematics	34.99	34.88	n.a.*	31.15	34.70	32.64
English	37.92	32.28	n.a.*	30.85	28.68	34.56
Science	38.07	37.22	n.a.*	39.34	35.21	39.39
Social Studies	49.33	42.44	n.a.*	41.69	41.75	41.37
Grade 12						
Thai	44.49	49.25	48.62	50.33	50.70	46.42
Mathematics	33.99	35.08	28.46	29.56	32.49	35.98
English	39.14	32.45	29.81	32.37	30.93	30.64
Social Studies	41.85	42.05	42.64	37.94	37.76	34.67
Science	48.82	44.33	34.01	34.88	34.62	33.65
Chemistry	38.65	35.56	n.a.*	n.a.*	n.a.*	n.a.*
Biology	36.76	42.02	n.a.*	n.a.*	n.a.*	n.a.*
Physics	32.59	35.24	n.a.*	n.a.*	n.a.*	n.a.*

Data source: Office of the Permanent Secretary, Ministry of Education, Educational Statistics in Brief 2008, citing data from Bureau of Education Testing, Office of Basic Education Commission, and National Institute of Educational Testing Service (Public Organization)

ICT is expected to play a major role in upgrading the quality of education. Ministry of Education has made effort to allocate more computers to schools. The private sector and the public have also contributed. The plan is to improve the computer per student ratio from 1:40 in 2009 to 1:20 by 2011.

Youth of both sexes have high ***literacy rate***; 98% of population 15-24 years old have been literate since 1995. Thailand is also keen on developing ICT literacy as ICT has become an important educational tool. During 2004-2007, computer literacy rate of population 15-24 years rose from 49.2% to 51.8%, while internet literacy increased from 32.1% to 39.7%.

Challenges

The "education reform" has progressed slowly, despite a consensus that it is among top national agendas that should be vigorously pursued to enhance the quality of life of the people and to boost national competitiveness. Second round of education reform should focus on the followings.

1. ***Enhance educational quality and standards*** to drive Thailand's development toward a knowledge-based society. An emphasis should be on developing education institutes to meet national education standards, developing students, teachers and education personnel, enhancing the efficiency of basic education and pre-school education to ensure that education helps students fulfill their potential.

2. ***Upgrade the quality of vocational education*** to fill the skilled labor gap. The MoE's plan includes both infrastructure development and teacher development. Another important challenge is to attract students with good potential, and to collaborate with the industry to ensure that the curriculum responds to market demands.

3. ***Make better use of ICT for education*** to solve the teacher shortage problem, to expand access to education for students in remote areas, and to improve the quality of learning. The MoE is developing quality interactive e-learning for all levels of education. It is important that all major actors are committed to quality development that includes ICT based management, teacher and curriculum development, ICT for education development, development of educational technologies, e.g. radio, TV, public libraries, and community learning centers, all of which contribute to life-long learning for people in every part of the country.

4. ***Decentralize education management.*** Despite the Decentralization Act, and the Decentralization Plan that mandate the transfer of education management to local administrative organizations, the power still remains with the central authorities. The Thai society is still debating the pro and con of this issue.

Goal 3: Promote Gender Equality and Empower Women

MDG 3A	**Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015**	**Achieved**
MDG+	***Double the proportion of women in the Parliament, Sub-district Administrative Organizations, and executive positions in the civil service during 2002-2006***	***Not achieved***

Table 3.16 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. Ratio of girls to boys in primary education	0.95 (1991)	0.94 (1996)	0.93	0.94 (2006)	0.94	1.00 (2009)	-
2. Ratio of girls to boys in secondary education	0.97 (1991)	1.02 (1996)	1.01	1.04 (2006)	1.04	1.00 (2015)	-
3. Ratio of women to men in tertiary education	1.00 (1991)	1.00	1.12	1.20 (2006)	1.19	1.00 (2015)	-
4. Ratio of female to male literacy rate among the 15-24 year-old age group	0.89	-	1.00	1.0	-	-	-
5. Share of women in waged non-agricultural employment (%)	45.10	44.00	46.10	45.5	45.0 (2007)	-	-
6. Share of women in the National Parliament (%)	-	-	-	-	-	-	-
1) Female MPs (%)	-	5.60 (1996)	9.20 (2001)	10.6	11.70 (2007)	-	18.40 (2006)
2) Female Senators (%)	-	-	10.50	23.50 (2006)	15.80 (2008)	-	21.00 (2006)

Data sources:
1-2. Calculated from data from ICT Center, Office of the Permanent Secretary, Ministry of Education
3. Calculated from data from Office of the Higher Education Commission
4. Calculated from National Statistical Office, Population and Housing Census 1990, 2000; Survey of Population Change 2005
5. Calculated from National Statistical Office, Labor Force Survey (3rd Quarter)
6. Calculated from data from Office of the Secretary of the Members of the Parliaments, and Office of the Secretary of the Senate

Table 3.17 MDG+ indicators

MDG+ indicators	2002	2003	2004	2005	2006	2007	2008	MDG+ target
1. Female to male students in selected fields in tertiary education	-	-	-	-	-	-	-	-
2. Ratio of literate women to men over 40 years old (%)	-	-	-	0.92	-	-	-	-
3. Proportion of women's to men's income from waged non-agricultural employment (%)	-	-	-	90.00	94.00	-	92.00 (2007)	-
4. Share of women in Sub-district Administrative Organizations (%)	8.90 (2001)	-	-	-	11.10	-	-	17.80 (2006)
5. Share of women in executive positions in the civil service (%)	17.80	20.90	20.20	21.80	23.10	22.20	-	35.60 (2006)

Data sources:
1. Calculated from data from Office of the Higher Education Commission
2. Calculated from National Statistical Office, Survey of Population Change 2005
3. Calculated from National Statistical Office, Labor Force Survey (3rd Quarter)
4. Department of Local Administration
5. Office of the Civil Service Commission

Progress Report

Education

Girls and boys have equal opportunities in primary and lower secondary education, which is obligatory education. ***Ratio of boys to girls in primary education*** was lower than 1 as boys outnumbered girls in school, but there were also more boys in this age group. The enrolment rates were nearly the same for both sexes, and were higher than 100% due to underaged and overaged students.

At the upper secondary and tertiary levels, girls' enrolment rate was higher than boys'. In 2007 female ***tertiary enrolment rate*** was 74.4%, compared with 59.9% for men. Female to male tertiary enrolment rate was therefore higher than 1 in all disciplines, with few exemptions, e.g. in engineering.

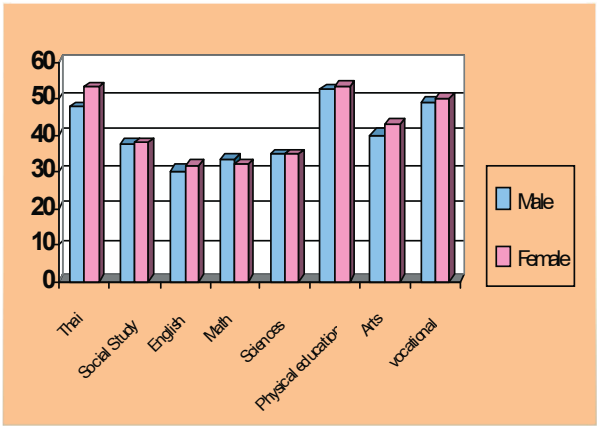
Table 3.18 Tertiary Education by Discipline, Academic Year 2007

Discipline	Male students (number)	Female students (number)	Total (number)	F/M Ratio
Agriculture	30,608	63,398	94,006	2.07
Services	17,240	47,679	64,920	2.77
Humanities and Arts	63,630	98,855	162,485	1.55
Sciences	95,169	102,963	198,132	1.08
Engineering	143,792	40,286	184,078	0.28
Social Sciences, Business Administration and Law	410,203	594,733	1,004,936	1.45
Health and Welfare	26,930	62,146	89,076	2.31
Total	**815,423**	**1,033,607**	**1,849,030**	**1.27**

Data Source: Data from individual records, academic year 1/2007, from 139 tertiary education institutes (out of the total of 145 institutes)

In terms of ***education achievement***, in 2007 the Grade 12 Ordinary National Education Test (O-Net) showed that female students scored higher in Thai, arts, and English, but slightly lower in mathematics. In other 4 subjects, both sexes were approximately on par.

Figure 3.2 O-Net Average Scores, Academic Year 2007



Source: National Institute of Educational Testing Service (Public Organization)

In 2008, 4.5 million enrolled in informal education, with almost equal share between women and men. But more women completed the study; women accounted for 56.2% of 2.3 million who completed the study in the same year.

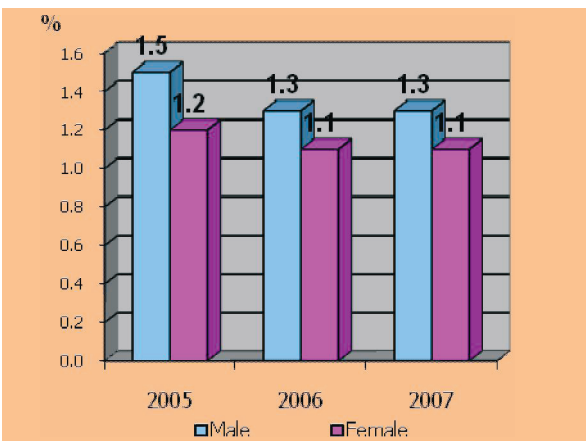
Literacy rate of the Thai people is high, and the gender gap is very small especially in the 15-24 year-old age group. In 2005 youth literacy rate was 98.4% for women and 99.2% for men, or a 0.99 female to male ratio. This ratio was 0.92 among population 40 years old and over.

By and large, although both sexes have equal education opportunities, women make better use of theirs. But women face more limitations in terms of life-long learning. Women and men read at the same rate until they reach 29 ages of age. After 30, women read less, and the gap widens as they age. This is partly due to their preoccupation with household responsibilities; in 2004 women spent 6 hours a day taking care of their family and community, compared with men's 3.5 hours. Hence, they had less time for work and learning/self-improvement[3].

Employment

A large part of women in non-agricultural sector are engaged in unpaid family business or collective work, while men work as employer, government or private sector employees, and own-account workers. ***The share of women in waged non-agricultural employment*** (government, state enterprise, private sector) has stayed around 45%, and lower than men's in all regions. Although by law women and men get the same wage for the same work, men generally have better chance at career advancement and make more income in non-agricultural work. ***The ratio of women's to men's income in non-agricultural employment*** stayed between 90-94% during 2005-2007. Nevertheless, it should be noted that women have lower unemployment and underemployment (those who work less than 7 hours/day or 35 hours/week and are willing to work more) rates.

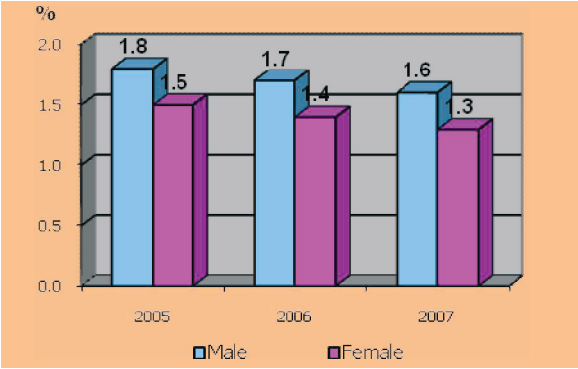
Figure 3.3 Unemployment by sex, 2005-2007



Source: National Statistical Office, Labor Force Survey (3rd Quarter)

[3] National statistical Office, Time Use Survey, 2004.

Figure 3.4 Underemployment by sex, 2005-2007



Source: National Statistical Office, Labor Force Survey (3rd Quarter)

Public decision-making

Thailand has failed to achieve the MDG+ target to double the share of female representation in the National Assembly, sub-district administrative organizations, and high-level executives in the central administration. Major obstacles are social values and traditional norms that emphasize the role of women in the households.

In all regions, fewer women run for electoral offices. The good news is that male and female candidates have very close success rates. It is also interesting to note that women have a very small share in the party-list MPs. In 2005, there were only 6 women out of the total of 100 party-list MPs. In 2007, there were only 7 women out of the total of 80.

In addition, there was a very small female representation in the 3 cabinets during 2005-2008; each cabinet had no more than 3 female members or only about 8%.

Very small number of women ran and were elected to the local administrative organizations[4]. In 2007, ***the share of women in local administrative management*** was only 8-14%[4] and only 3-6% of sub-district chiefs, and village headmen were women. (provincial administration)

Women outnumbered men and constituted 61.7% of the civil servants[5]. But they have not been successful in advancing to the executive level. In 2007, female permanent secretaries dropped to 5.3%, a setback from the previous 3 years. As a matter of fact, Thailand has made very little progress in closing this gap in the past 15 years.

Table 3.19 Share of women in MP and senatorial candidates and successful candidates

Senators			MPs		
	2000	**2008**		**2005**	**2007**
Candidates	n.a.	12.70	**Candidates**	10.80	14.70
Successful candidates	10.40	16.00	**Successful candidates**	10.60	11.70
Selected	-	*16.20*	*Party list*	*6.00*	*8.80*
Elected	10.50	*15.80*	*Constituency*	*11.80*	*12.30*
Data source: Office of Women Development and Family Affairs					

[4] Presidents of the PAO, Mayors, SAO Presidents, PAO Councilors, Mayoral Councilors, SAO Councilors.
[5] Excluding teachers, officials in higher education institutes, legislative bodies, Bangkok Metropolitan Administration, local administrative organizations, autonomous organizations, public prosecutors, judges, the police officials.

Table 3.20 High-level executives in local administrative organizations, sub-district chiefs, and village headmen by sex, 2008

Position	Female		Male	
	Total (persons)	(%)	Total (persons)	(%)
Presidents of the Provincial Administrative Organization	6	8.00	69	92.00
Provincial Councilors	253	11.58	1,932	88.42
Mayors	135	8.30	1,493	91.70
Municipal Councilors	2,517	14.41	14,948	85.59
Sub-district Administrative Organization Presidents	287	4.67	5,862	95.33
Sub-district Administrative Organization Councilors	13,498	11.11	107,973	88.89
Sub-district Chiefs	265	3.85	6,625	96.15
Village Headmen	4,110	6.00	64,335	94.00
Total	**21,071**	**9.40**	**203,237**	**90.60**

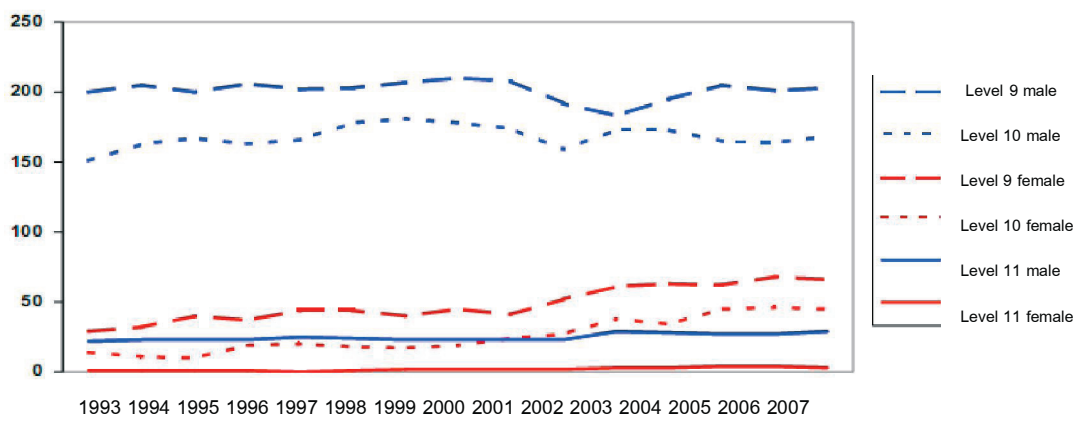
Data source: Data collected from Department of Local Administration by the Office of Women Development and Family Affairs

Table 3.21 Share of women in the executive positions (C9-11) in the civil service

Executive positions	2004	2005	2006	2007
Permanent Secretary, C11	10.5	12.9	10.5	5.3
Secretary-General / Director, C11	8.3	16.7	18.2	15.4
Deputy Permanent Secretary, C10	7.6	14.3	21.4	10.5
Deputy Secretary-General/Deputy Director, C10	31.8	40.5	34.9	36.4
Director-General/Secretary-General/ Director, C10	14.6	17.9	17.1	20.5
Deputy Director-General/Deputy Secretary-General/Deputy Director, C9	24.4	23.2	25.3	24.5
Total	**20.2**	**21.9**	**23.1**	**22.2**

Data source: Office of the Civil Service Commission

Figure 3.5 High-level executives by sex, fiscal years 1993-2007



Source: Office of the Civil Service Commission, Civilian Workforce in Thailand 2007

Further, Thai women still lag behind men in decision-making positions in business and social organizations. For examples[6],

- In 2006, women accounted for 35.37% of the directors in 540,000 juristic entities and public companies.
- In 2007, women made up 21.8% of directors of 218 companies registered at the Security Exchange of Thailand.
- In 2008, 14.9% of the executive members of the provincial chambers of commerce were women.
- In 2008, women made up 25.5% of cooperatives' executive committees.
- In 2008, women accounted for 47.4% of members of the executive committee of community organizations.

Challenges

Education is the area in which gender equality is most prominent. In the workplace, women have had difficulty advancing to higher positions in almost all sectors. But the most glaring gap is in public decision-making. Next steps should focus on the followings.

1. ***Increase female representation in politics*** is the priority of the Women Development Plan during the 10th National Economic and Social Development Plan (2007-2011). The strategy is to promote the understanding and cultivate a new social norm, to amend important legislations to introduce a quota system for national committees and local administrative organizations, as well as to use temporary measures to equalize the shares of women and men in the SAOs, to persuade political parties to field more female candidates, promote women to key party positions, and give priority to female party-list candidates.

2. ***Strengthen the role of Chief Gender Equality Officer (CGEO)*** as the key mechanism for increasing the number of female executives. The CGEO system is also expected to expand to state enterprises, public organizations, independent organizations, and provincial and local administrative organizations at all levels.

[6] Data from Department of Business Development, registered companies at the Security Exchange of Thailand, Provincial Chambers of Commerce, Cooperative Promotion Department, and Community Organizations Development Institute (Public Organization), collected and process by the Office of Women Development and Family Affairs.

Goal 4: Reduce Child Mortality		
MDG 4A	**Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate**	**Not applicable**
MDG+	***Reduce infant mortality rate to 15 per 1,000 live births by 2006***	***Cannot assess due to change of data***
MDG+	***Reduce by half, between 2005 and 2015, the U5MR in highland areas and selected northern and three southernmost provinces***	***Unlikely to achieve***

Table 3.22 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. Under-five mortality rate (per 1,000 live births)	12.80	11.60	11.90	10.80	9.90	-	-
2. Infant mortality rate (per 1,000 live births)	8.00	7.20	6.20	7.60	7.30	-	15.00[7] (2006)
3. Proportion of 1-year-old children immunized against measles (%)	78.00	-	94.20 (1999)	96.10 (2003)	98.10	-	-
Data sources: 1-2. Bureau of Health Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health 3. Bureau of Epidemiology, Department of Disease Control							

Table 3.23 MDG+ indicators

MDG+ indicators	2002	2003	2004	2005	2006	2007	2008	MDG+ target
1. Under-five mortality rate in Mae Hong Son (per 1,000 live births)	15.80	17.60	12.60	10.90	14.90	15.90	13.40	5.45 (2015)
2. Under-five mortality rate in Yala (per 1,000 live births)	15.54	15.35	15.72	12.73	15.63	13.54	13.76	6.36 (2015)
3. Under-five mortality rate in Pattani (per 1,000 live births)	16.87	17.35	15.48	12.97	14.87	14.57	13.86	6.48 (2015)
4. Under-five mortality rate in Narathiwat (per 1,000 live births)	18.68	16.85	16.98	18.22	18.41	15.85	18.03	9.11 (2015)
5. Infant mortality rate in Mae Hong Son (per 1,000 live births)	8.30	7.60	6.80	7.20	8.70	11.60	9.50	-
6. Infant mortality rate in Yala (per 1,000 live births)	10.20	10.80	12.60	9.40	11.10	10.00	10.40	-
7. Infant mortality rate in Pattani (per 1,000 live births)	10.50	10.50	8.80	8.00	10.80	10.70	10.00	-
8. Infant mortality rate in Narathiwat (per 1,000 live births)	12.80	11.90	12.50	14.80	13.00	12.30	14.10	-
Data source: Bureau of Health Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health								

[7] The new data set shows IMRs that are lower than the old data set. It is therefore not possible to assess progress made toward the target set on the basis of the old data set.

Progress Report

Baseline data show very low U5MR and IMR that it is not realistic to expect a two-thirds reduction. Government agencies' on-going data improvement makes it difficult to evaluate real progress. But the important issue is that the ***U5MR and IMR in the mountainous areas of the North and the three southernmost provinces have not shown any downward trend, which makes it unlikely to achieve the MDG+ target.***

Infant and child mortality

The under-five mortality rate has dropped due to improved socio-economic development and better health care. In 2008, the U5MR was only 9.9 per 1,000 live births.

The infant mortality rate accounts for approximately 70% of the U5MR, as most deaths occur during the first year of age. This report has switched from survey data to death registration. Underreporting is a problem for registration data as parents especially in remote areas sometimes neglect to file the report. Delayed-reporting also results in misclassification. But the quality of administrative data has considerably improved. The new data series show IMF at 8.0 per 1,000 live births in 1990, declining to 7.3 in 2008. Unfortunately, it is not possible to assess the MDG+ achievement as the MDG+ target was set against the old data series.

Thai children receive ***measles vaccination*** twice. They receive measles vaccine at the age of 9-12 months. At first grade, they received mixed vaccination for measles, mumps, Rubella (MMR). The latest survey shows 98.1% coverage of vaccination for 1-year old and 91.6% for first graders in 2008 (excluding Bangkok and 3 southernmost provinces). Nevertheless, some children in some areas, especially migrant children in urban areas, children in remote areas and the deep South, may miss the vaccination. In terms of effectiveness, measles incidence fell from 52.34 per 100,000 in 1990 to 11.93 in 2008.

Infant and child mortality in mountainous areas in northern and the southernmost provinces

There is no specific data system for mountainous areas. ***Mae Hong Son Province*** where 80% of the population are highland peoples is used as proxy. In 2002, U5MR in Mae Hong Son was 15.8 per 1,000 live births, declining to 13.4 in 2008, while the IMR remained largely at the level of 9.5 per 1,000 live births in 2008.

In the ***3 southernmost provinces***, IMF increased due to the improvement of death registration. Some data are still missing or misclassified due to delayed reporting. During fiscal years 2005-2008, about 10% of births were assisted by mid-wives at home. Deaths are unlikely to be reported. Most deaths take place during the first 7 days. At this stage, the child's health is determined by the mother's health. In fiscal year 2008, 15.7% of pregnant women in these provinces had anemia which may result in underweight birth, higher risk to sickness and death. Higher IMR also led to higher U4MR in this area.

In sum, during 2005-2008, Mae Hong Son and the 3 southernmost provinces witnessed an increase in U5MR, due to the improvement of the data system and violent situation that made health access and health outreach more difficult. ***This means that it is unlikely to achieve the MDG+ target to halve the U5MR in these areas during 2005-2015.***

Challenges

Two important challenges are a) different data sources which the agencies concerned are collaborating to develop a comprehensive, efficient and high quality data system, and b) some areas that witness slower progress than the rest of the country. The followings should be policy priorities.

1. ***Earmark special development budget for priority areas and population groups*** that are difficult to reach. Periodic monitoring and surveillance systems are needed for communities of different socio-economic and cultural contexts.

2. ***Integrate different data systems into the national data system.***

3. ***Increase awareness and sensitivity to different local and cultural contexts*** and other issues related to health services in highland areas and the deep South.

4. ***Enhance the capacity of local personnel in surveillance and reducing maternal and child risks*** from pre-natal to delivery and post-natal stages.

5. ***Strengthen the capacity of community groups, local leadership, and village health volunteers*** in situation surveillance and reporting data on maternal and child health, nutrition, vaccination, and child development.

6. ***Promote the sharing of experience and best practices*** among network organizations, and the collaboration within and outside the country.

Goal 5: Improve Maternal Health

MDG 5A	**Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio**	**Not applicable**
MDG+	***Reduce maternal mortality ratio to 18 per 100,000 live births by 2006***	***Cannot assess due to change of data***
MDG+	***Reduce by half, between 2005 and 2015, the maternal mortality ratio in highland areas, selected northern provinces and the three southernmost provinces***	***Potentially***

Table 3.24 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. Maternal mortality ratio (per 100,000 live births)	-	-	44.50 (2004)	41.60 (2006)	49.90 (2007)	-	-
2. Proportion of births attended by skilled health personnel (%)	90.80	94.40	98.00 (2001)	99.00	-	-	-

Data sources:
1. Bureau of Health Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health
2. Department of Health

Table 3.25 MDG+ indicators

MDG+ indicators	2002	2003	2004	2005	2006	2007	2008	MDG+ target
1. Maternal mortality ratio in Mae Hong Son (per 100,000 live births)	55.30	33.20	79.00	n.a.	27.20	113.40	29.70	53.10* (2015)
2. Maternal mortality ratio in Yala, Pattani and Narathiwat* (per 100,000 live births)	-	44.00	40.50	42.00	40.20	52.60	39.60	21.00

Remarks: Due to high fluctuation of provincial data, it is decided that an average MMR of the three provinces should be used instead of MMR of each province. The MDG+ target is based on the average value in 2005.

Data sources:
1. Bureau of Health Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health
2. Regional Health Center, Department of Health

Progress Report

The causes of most maternal deaths are hemorrhage, toxemia of pregnancy, and infection, which can be significantly reduced by proper pre-natal care. There are different data sources for ***maternal mortality ratio***. Ministry of Public Health (MoPH) has improved data from administrative reports and conducted researches to analyze the numbers and causes of maternal deaths from various sources in accordance to the ICD-10 guidelines. These sources include birth and death registration from the civil registration records, data on deaths of reproductive women, ante-natal care records from the

National Health Security Office, social security system, and civil servants' medicare system. The finding indicates that MMR per 100,000 live births were 44.5, 41.6 and 49.9 in 2004, 2006, and 2007, respectively. This means that the civil registration data shows only one-third of total MMR (largely only those directly related to deliveries). The MoPH has set a policy to improve the MMR data by linking data from civil registration that has over 90% coverage with data from other sources. This new data series will be used in the MDG report starting with this issue. It should be noted that this new data system has not been developed at the provincial level. The old data series is used for provincial MMR.

There is no special data system for ***MMR in northern highland areas.*** Mae Hong Son MMR, used as proxy for highland MMR, is considerably higher than the national average. Traditional way of life remains largely intact among communities in remote, outback areas. The people do not have all-year round access to health services. An endeavor to reach out to these groups has limited success. An important obstacle is the traditional beliefs and diverse lifestyles of the highland peoples.

MMR in the three southernmost provinces remains significantly higher than the country's average. Government agencies' pro-active strategies have been constrained by instability in the area. An examination of data on maternal deaths finds that some had high risk factors, e.g. underage (<20 years old) and overage (>35 years old) pregnancies, having more than 3 children. This calls for an interdisciplinary remedy and integrative programs by several agencies.

Challenges

Maternal health is the first step of human development. It is important that all agencies and sectors collaborate and that these issues are given high priorities. The MoPH sets a MMR target of 36 per 100,000 live births by 2011 and has integrated all reproductive health programs and projects that would contribute to the reduction of MMR, e.g. enhancing the awareness and education, expanding access and increasing the efficiency of birth control. Important measures are as follow.

1. ***Expand the coverage and continue to improve the quality of the data system*** to harmonize the MMR data and facilitate the monitoring and evaluation of maternal health programs.

2. ***Develop interdisciplinary knowledge and mechanism for implementation*** by all agencies and multi-sectoral partners to curb teenage pregnancy and unwanted pregnancies, e.g. by expanding access to family planning.

3. ***Develop area-based implementation strategies:***

In the northern highland areas, it is important to promote awareness and understanding through various media, especially via local personnel such as volunteer teachers at Mae Pha Luang Learning Center for Highland Peoples, border patrol teachers. Most important is to alert the youth of the necessity of family planning, and to adopt pro-active approach with an aim to add 1-2 years to the average pregnancy age.

In the three southernmost provinces where the people are predominantly Muslim, social and cultural dimensions are immensely significant. Recent measures should be accelerated and expanded on a continuous basis.

- On effective communications about maternal and child health: Religious leaders now use a happy-family manual to educate and prepare young people prior to their marriage. Manual for maternal care according to Islamic teachings are used to promote the understanding among health personnel and the public. Communities also receive support to produce local media for effective advocacy.
- On the service system: A referral system for high-risk pregnancies and deliveries is now in place. Service areas have

also been renovated to accommodate religious practices, including a hazan corner. Traditional midwife is allowed to stay with the mother-to-be in the pre-delivery room.

- On health personnel: All levels of health personnel have been trained to identify risk factors during pregnancy, and to provide the care, to refer the case if required, to provide counseling and services for birth spacing.
- On networking: It is important to strengthen the capacity of health networks and communities to participate more actively in maternal health care, including training of traditional midwives and village health volunteers to identify risk factors during pregnancy.

MDG 5B	Achieve, by 2015, universal access to reproductive health	Likely

Table 3.26 MDGs indicators

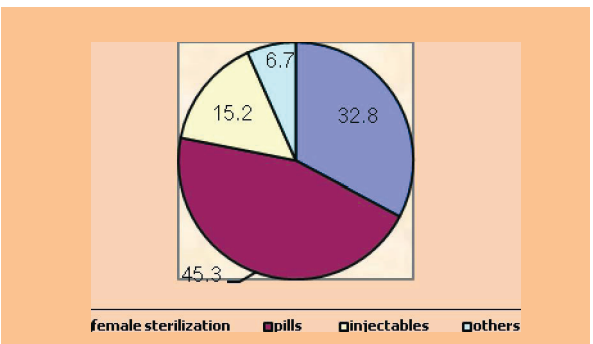
MDG indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. Contraceptive rate (%)	64.70 (1989)	75.20	79.20	81.10 (2006)	-	-	-
2. Births by women 15-19 years old (per 1,000 women 15-19 years old) (number)	42.20	41.20	31.10	49.30	50.10	-	-
3. Ratio of completed ante-natal care (4 times) (%)	n.a.	83.40	91.80	90.00	n.a.	-	-
4. Unmet need (%)	n.a.	5.90 (1996)	1.20 (2001)	n.a.	n.a.	-	-

Data sources:
1. National Statistical Office, Reproductive Health Survey
2. Bureau of Health Policy and Strategy, Office of the Permanent Secretary, MoPH, Annual Health Statistics
3. Department of Health
4. 1996 data are from Institute for Population and Social Research, Mahidol University, Contraceptive Survey in Thailand, 1996. 2001 data from Chayovan, Napaporn et al. Economic Crisis, Demographic Dynamics and Family in Thailand. College of Population Studies, Chulalongkorn University, 2003.

Progress Report

Thailand's family planning program is highly successful. ***Contraceptive rate*** among married women aged 15-49 increased from 64.7% to 81.1% during 1989-2006, with insignificant difference between urban and rural areas. In 2001, ***unmet need*** was only 2.1%, compared with 5.9% in 1996. But the surveys did not include unmarried women who are sexually active.

Figure 3.6 Contraceptive methods by percentage, 2006



Remark: Others include male sterilization, condom, sub-odermal implants, IUD, safe period, others, and unknown.

Source: National Statistical Office, Reproductive Health Survey, 2006

Birth control responsibility rested mainly with women. Most popular methods were pills, female sterilization, and injectables. Male sterilization and condom accounted for only 1.1% and 1.5%.

Adolescents and the youth deserve special attention. Survey data indicate that contraceptive rate among married women aged 15-19 was 72.2%. ***Births by women 15-19 years old per 1,000 population*** have been on the rise, which is a cause of concern as underage pregnancies are often unplanned, involving risks for both the mother and the child.

Underage pregnancy is exceptionally high among highland people. Department of Health's Survey of Demographic Structure and Health Situation in 6 Hill tribes during 2005-2007 found that women in reproductive ages who had their first child before the ages of 20 was 43.1% for the Karen, 68.6% for Hmong, 66.6% for Lahu, 32.1% for Akha, 55.2% for Mien (Yao) and 41.5% for Lisu.

Another priority area/population group is the deep South where there is a concentration of Muslim. Contraceptive rate is much lower at 69.7%. Other marginal groups, e.g. hill tribe, migrant workers also have low contraceptive rates.

Thailand's reproductive health system has a broad-based coverage. Since 1995, the MoPH's public health service standards require that all primary health centers offer 3 basic reproductive health services, namely maternal and child health, family planning, and screening for cancer at reproductive organ. At present, these services are funded by the national health security system.

Completed ante-natal care (4 times) reached 90% in 2005. More sophisticated services are available at secondary and tertiary health facilities through a referral system. However, the first ante-natal check-up is delayed. Most pregnant women had their first check-up after 12 weeks of pregnancy.

Challenges

It is a challenge to bridge the service gaps in reproductive health and to enhance the quality of service. Key measures are as follow.

1. ***Expand the coverage of reproductive health data to include unmarried women who are sexually active,*** especially adolescents. Such data should be periodically updated and systematically maintained.

2. ***Adopt pro-active measures in adolescent reproductive health*** by applying youth-friendly health service approach that emphasizes effective communications with the target group and convenient access to services.

3. ***Expand cultural-sensitive program activities and monitor progress in special population groups,*** namely Muslim population in the three southernmost provinces, hill tribe people, and migrant workers.

4. ***Promote new approach in reproductive health and maternal and child health care*** that gives high priority to quality of services and increased role and responsibility for men, family and the community.

5. ***Upgrade the capacity of local personnel and line agency's supporting network.***

Goal 6: Combat HIV/AIDS, Malaria, and Other Diseases		
MDG 6A	**Have halted by 2015 and begun to reverse the spread of HIV/AIDS**	**Achieved**
MDG 6B	**Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it**	**Likely**
MDG+	***Reduce HIV prevalence among reproductive adults to 1 percent by 2006***	***Cannot assess due to change of data***

Table 3.27 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. HIV prevalence among population aged 15-24 (%)	-	-	0.95 (2003)	0.45	M 0.50 F 0.58	-	-
2. Grade 11 male students who always use condom when having sex (%)	-	30.00 (1996)	22.20	56.30	54.50	-	-
3. Proportion of population aged 15-24 with comprehensive correct knowledge of HIV/AIDS (%)	-	-	18.67	31.15	37.42 (2007)	-	-
4. Proportion of population with advanced HIV infection with access to antiretroviral drugs (%)	-	-	-	41.00	67.14 (adult 66.49 Children 86.06)	-	-

Data sources:
1-3. Bureau of Epidemiology, Department of Disease Control
4. National HIV/AIDS Committee, National Progress Report as per the United Nations General Assembly Special Session on HIV/AIDS, Thailand, 2008-2009

Table 3.28 MDG+ indicators

MDG+ indicators		2002	2003	2004	2005	2006	2007	2008	MDG+ target
1. HIV prevalence among pregnant women (%)		1.39	1.18	1.04	1.01	0.87	0.76	0.72	-
2. HIV prevalence among military conscripts (%)	1st round	0.50	0.50	0.50	0.40	0.50	0.40	0.50	-
	2nd round	0.90	0.60	0.50	0.50	0.40	0.50	-	

Data sources:
1. Bureau of Epidemiology, Department of Disease Control
2. Armed Force Research Institute of Medical Sciences, Royal Thai Army Medical Department

Progress Report

The encouraging trend 5 years ago is fading as there have been signs of renewed HIV infection. HIV/AIDS may renew its threat on the Thai people if the prevention and management becomes less vigilant. Nevertheless, ***Thailand has achieved the MDG target of having halted and reversed the spread of HIV/AIDS by 2015, and is likely to achieved universal access to treatment for HIV/AIDS for all those who need it by 2010.***

HIV infection in general population

HIV/AIDS is the most serious threat for the workforce. 85% of those infected are in the 15-45 age group. Daily workers constitute the largest group– 45%, followed by farmers– 20%.

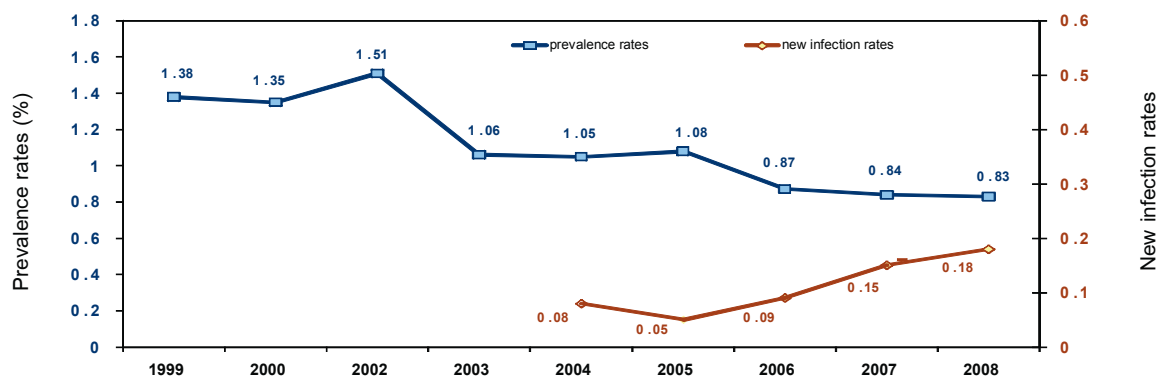
Box 3.4 Estimated population with HIV infection, 2009

Estimated population with HIV infection, 2009	
HIV-infected working-age population, cumulative	1,127,168
HIV-infected population, living	516,632
HIV new infection in 2008	12,787
HIV-infected, dead in 2008	26,935

HIV surveillance in general population consists of behavioral surveillance and HIV blood test which is costly and cannot be conducted in every population group. At present, HIV prevalence rates among pregnant women and military conscripts are used as proxy indicators for the general population. In the past decade, the prevalence rates have dropped. For pregnant women, the rate dropped from 1.46% in 2000 to 1.01% in 2005, and 0.72% in 2008. Since 2005, HIV prevalence among military conscripts (20-24 years old) has remained constant at 0.4-0.5%.

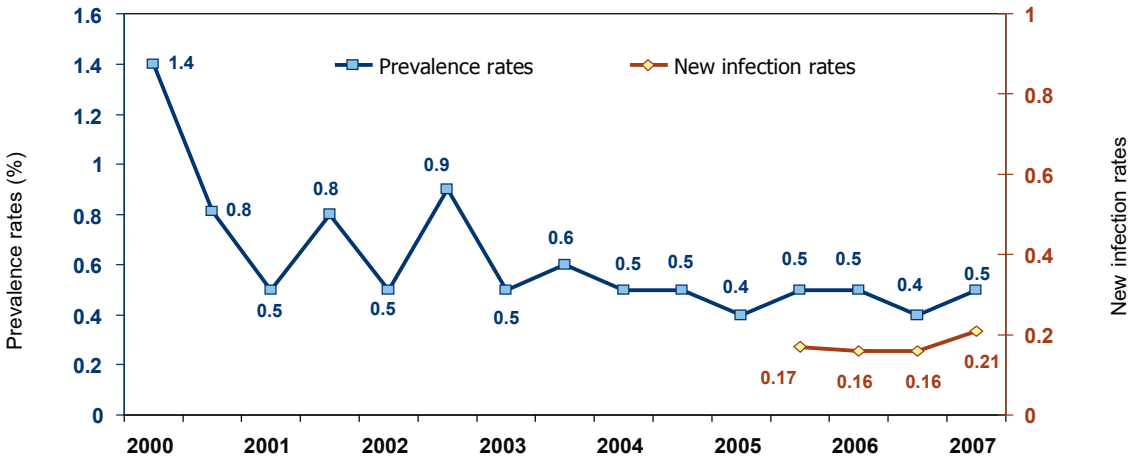
However, during 2005-2008, ***new infection*** (less than 1 year) has increased. It increased from 0.5 per 1,000 to 1.8 per 1,000 among pregnant women. For military conscripts, the rate increased from 1.7 per 1,000 to 2.1 per 1,000. Without effective measures, the infection could spread and undermine Thailand's commitment to halve the number of new HIV infection by 2011 which is the UNGASS target under the Universal Access Program of which Thailand was a party in 2007.

Figure 3.7 Pregnant women who came for ante-natal care during June-July (38 provinces)



Source: Bureau of Epidemiology, Department of Disease Control, and Thailand-US CDC Collaboration (TUC)

Figure 3.8 Military conscripts (aged 20-24 years old)



Source: Armed Force Research Institute of Medical Sciences, Royal Thai Army Medical Department, Bureau of Epidemiology, Department of Disease Control, and Thai-USA Health cooperation.

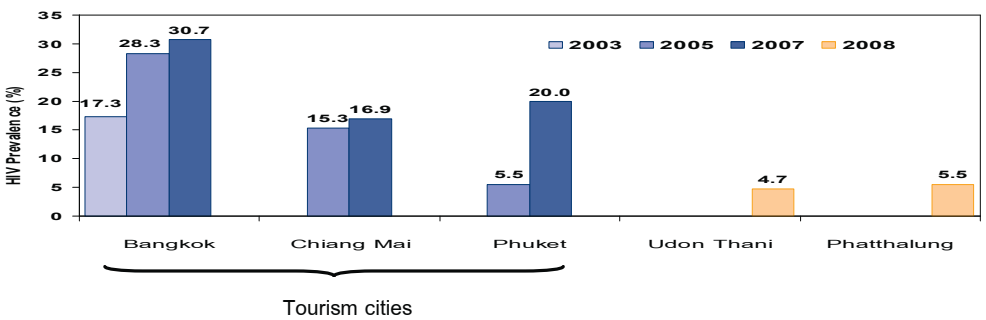
At-risk population

Population who have a high risk for HIV infection are sex workers, men who have sex with men (MSM), and injecting drug users.

HIV prevalence among sex workers was very high at 28% in 1993, but drastically dropped as a result of rigorous and intensive prevention campaign. After 2004, the HIV prevalence dropped at a slower rate and stagnated around 4% among venue-based sex workers (brothels and motels), and 2.5% among indirect sex-workers in pubs, cafes, massage parlours, karaokes. At present, new infection rate has increased among the latter.

HIV prevalence among MSM has also risen. In 2007, HIV prevalence was 30.7% in Bangkok, 16.9% in Chiang Mai, 20% in Phuket. All these cities are entertainment and tourism centers. Prevalence rates for other cities namely Udon Thani and Phatthalung were approximately 5% in 2008.

Figure 3.9 HIV prevalence among MSM in selected provinces, 2003-2008



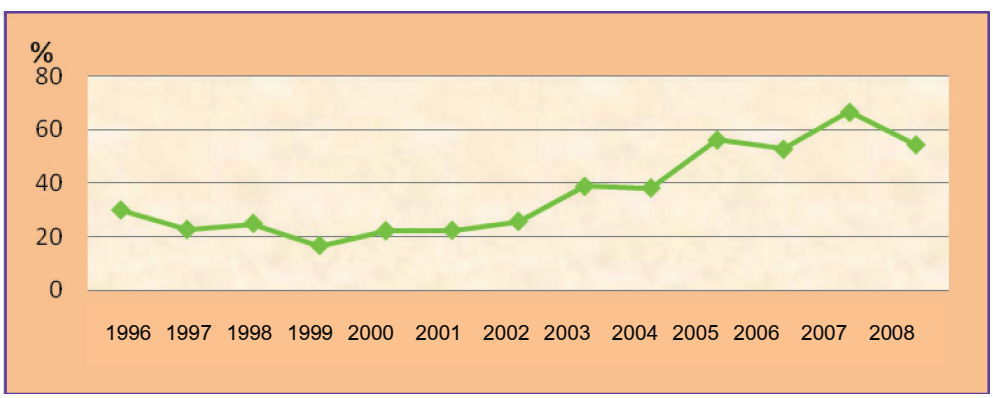
Source: Bureau of Epidemiology, Department of Disease Control, and Thailand-US CDC Collaboration (TUC)

According to behavioral surveillance data in 2007, the MSM's rate of regular use of condom for HIV/AID prevention when having sex in the past three months was very low, highest in Bangkok at 66%, was only 44% in Phuket and 36% in Chiang Mai.

A new at-risk group is adolescents and the youth. ***HIV prevalence among population aged 15-24*** dropped from 0.95% in 2000 to 0.45% in 2005, but went up in 2008. Infection rate was 0.50% for male, and 0.58% for female.

The proportion of population aged 15-24 having comprehensive and correct knowledge of HIV (know methods to prevent infection from sexual intercourse, and are knowledgeable about HIV/AIDS misinformation and myths) increased from 18.67% to 37.42% during 2000-2007. ***The proportion of male youth using condom*** when having sex with non-partners also increased from 22.2% to 54.5% during the same period. Nonetheless, these rates are still quite low. Given the sexual behaviors of today's youth, HIV infection is certainly a considerable risk for this population group.

Figure 3.10 Grade 11 male students who regularly use condom when having sex with non-partner during the past year, 1996-2007



Source: Bureau of Epidemiology, Department of Disease Control

Box 3.5 Risk behaviors among male and female students in 24 provinces, 2008

Risk behaviors among male and female students in 24 provinces, 2008

Social and cultural changes have led to premature sex, multiple sexual partners, sex in exchange for money or goods, same-sex relationship.

- 3% of lower secondary students, 15-24% of upper secondary students, and 37-43% of vocational students have had sex.
- In the past year, more than half of male students and 20% of female students who had sex, had more than 1 partner.
- 0.6% and 1.3% of male students in grade 8 and 11, and 3.2% of vocational students had sex in exchange for money or goods. As for female students, the percentage was 0.1%, 0.5% and 1.7%, respectively.
- In the past year, 0.4% of male students aged 12-13 had same sex intercourse. The rate was 2-3% for male students aged 16-17, and 5% for military conscripts aged 20-24.

Source: Survey by Bureau of Epidemiology, Department of Disease Control

AIDS orphans

Thailand does not have a systematic data on the number of HIV-infected children or children affected by AIDS. But all children who are aware of their HIV infection will receive treatment free of charge. Ministry of Social Development and Human Security and agencies concerned have developed a network of hospitals, NGOs, HIV-infected groups, and community organizations to provide assistance. But some children still have difficulty accessing the assistance, e.g. poor children, children in remote areas, out-of-school children, children whose parents are not aware of their infection, children who are reluctant to come for assistance for fear of discrimination, children who do not benefit from the Universal Healthcare Coverage, ethnic children, and migrant children.

In 2010, Thailand will prepare an UNGASS report, the Monitoring and Evaluation Task Force has planned to develop a data system to monitor the situation in AIDS orphans and children affected by HIV/AIDS. A national survey will be conducted to estimate the number of these groups.

Caring for HIV-infected and people living with AIDS (PLA)

The Universal Healthcare Coverage has boosted the coverage of the care for HIV-infected and PLA. ***Proportion of people with advanced HIV infection receiving ARV*** increased from 41% in 2005 to 52.9% in 2007. In 2008 the proportion reached 67.14%; 66.49% for adults, 86.06% for children. In 2010, the Government announced a policy to extend the rights to basic health service including health promotion, treatment, rehabilitation, prevention to non-citizens, e.g. migrant population, ethnic groups.

Challenges

For two decades, Thailand has had great success in combating HIV/AIDS. But it is necessary to monitor the situation very closely. Rapid changes in epidemiological pattern have led to new risks and new risk groups that need urgent prevention and control.

1. ***Develop of systematic data system*** that reflects area-based situation, and promote the sharing of data and information among agencies concerned to create a common understanding of the overall situation, which would lead to an integrated program to urge high-risk groups to seek counseling and HIV screening. An early treatment would enable HIV-infected to take care of themselves and to avoid spreading the infection.

2. ***Promote understanding and positive attitude for HIV/AIDS prevention*** among difficult-to-reach target groups and the public, and remove legal barriers.

- Social norms, service providers' attitude still represent an important obstacle for MSM to access services. Service providers need psychological and special training.
- Social norms, the attitude of policy-makers and practitioners are formidable barrier for controlling the infection among drug addicts. At present, there is no clear policy, and the gap remains.

3. ***Advocate teaching life skills about HIV/AIDS and sexual and reproductive health education in school and in family.*** This calls for a change of attitude among adults, especially teachers, health personnel, parents, most of who do not accept youth and adolescent sex.

4. ***Develop a gender and cultural-sensitive and friendly service.*** This should include friendly reproductive health service that allows users to make their own decision regarding prevention. A range of diverse treatment for sexually-transmitted infection should be encouraged. Other sectors should participate in providing counseling, caring and developing the quality of life for HIV-infected and PLA, with active participation by HIV-infected and PLA and religious groups.

MDG 6C	**Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases**	**Malaria – Achieved Tuberculosis – Unlikely Coronary artery disease - Unlikely**
MDG+	***Reduce malaria incidence in 30 border provinces to less than 1.4 per 1,000 by 2006***	***Achieved***

Table 3.29 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. Malaria incidence (per 1,000 population)	5.20	1.55	1.36	0.49	0.41	-	-
2. Malaria death (per 100,000 population) (per 100,000)	2.30	1.40	1.01	0.26	0.16	-	-
3. Tuberculosis prevalence rate (per 100,000 population)	35.30 (1992)	37.50	51.80	55.40	49.00	-	-
4. Tuberculosis death rate (per 100,000 population)	6.80	7.00	-	3.93	4.11 (2007)	-	-
5. DOT success rate (%)	-	-	69.00 (2001)	75.00	81.30 (2007)	-	-

Data sources:
1. Bureau of Vector Borne Disease, Department of Disease Control
2, 4 Bureau of Health Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health
5. Tuberculosis, Department of Disease Control

Table 3.30 MDG+ indicators

MDG+ indicators	2002	2003	2004	2005	2006	2007	2008	MDG+ target
1. Malaria incidence in 30 border provinces (per 1,000 population)	1.71	1.81	1.05	1.15	1.28	1.35	1.06	1.40 (2006)
2. Coronary Artery Disease in-patients (per 100,000 population)	140.90	165.70	185.70	198.70	232.70	262.30	276.80	-
3. Coronary Artery Disease death rate (per 100,000 population)	14.40	19.10	17.70	18.70	19.40	20.80	21.20	-

Data sources:
1. Bureau of Vector Borne Diseases, Department of Disease Control
2. Bureau of Non-Communicable Diseases
3. Bureau of Health Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health

Progress Report

Thailand has made exemplary progress in curbing and reducing the spread of malaria, but is unlikely to achieve the MDG target on Tuberculosis, due to impacts from HIV/AIDS. **The chance for lowering the incidence of Coronary Artery Disease (CAD) is also small due to the high-risk way of life of most people.**

Malaria

Malaria incidence and malaria death rates continued to drop. In 2008 malaria incidence was 0.41 per 1,000 population, and the death rate was 0.16 per 1,000.

The MDG+ target to lower malaria incidence in 30 border provinces was met; the incidence dropped from 1.71 per 1,000 population in 2002 to 1.28 in 2006 against the 1.40 target, and continued to drop to 1.06 in 2008.

Malaria is commonly found along the borders. In fiscal year 2008, 23,677 cases or 90.84% of all Thai cases were reported along the border areas. There were 25,446 cases of non-Thais. Ten provinces with highest incidences were Tak, Yala, Narathiwat, Mae Hong Son, Ranong, Kanchanaburi, Chumphon, Songkhla, Chantaburi and Prachuab Khiri Khan. Southern provinces reported substaintial increases, including areas where there had been no incidence for a long time. An important reason was unrest in the area; the authorities could not access the area to control the spread of the disease.

The most important measure is to locate those who are infected and to provide treatment as fast as possible. Due to budgetary constraint, the mobile clinic program was downsized. Important activities are undertaken by over 300 community-based malaria clinics supported by the national budget and Global Fund on Malaria. In fiscal year 2007, the screening by micro-scope and malaria knit covered over 2 million people, and were able to identify 35,587 positive cases.

Tuberculosis

Tuberculosis continues to threaten the Thai people. In 2007, the country was ranked by WHO as 18th among 22 countries that had the largest number of TB cases. According to WHO, Thailand has approximately 40,000 cases of new infection per year. Together all TB cases are estimated at 90,000, with 13,000 deaths per year.

Department of Disease Control reported that in fiscal year 2008, there were 30,814 ***new TB cases,*** or 49 per 100,000 population. All TB cases totaled 59,883, or 94 per 100,000 population (as of 18 November 2009).

In 2007, ***treatment success rate*** was 81.3%, an improvement from 71% in 2002, but lower than the MoPH's target of 85%. Death rate was 9%, and there was 5% case loss.

HIV has led to a surge in TB prevalence. TB cases increased in 53 provinces with HIV epidemic (over 1% HIV prevalence in pregnant women). Prevalence rate increased for all types of TB, from 94 per 100,000 population in 2003 to 95 and 98 in 2004 and 2005, respectively. By contrast, TB prevalence rate in non-HIV epidemic provinces was 92, 94, 91 per 100,000 population in 2003, 2004 and 2005.

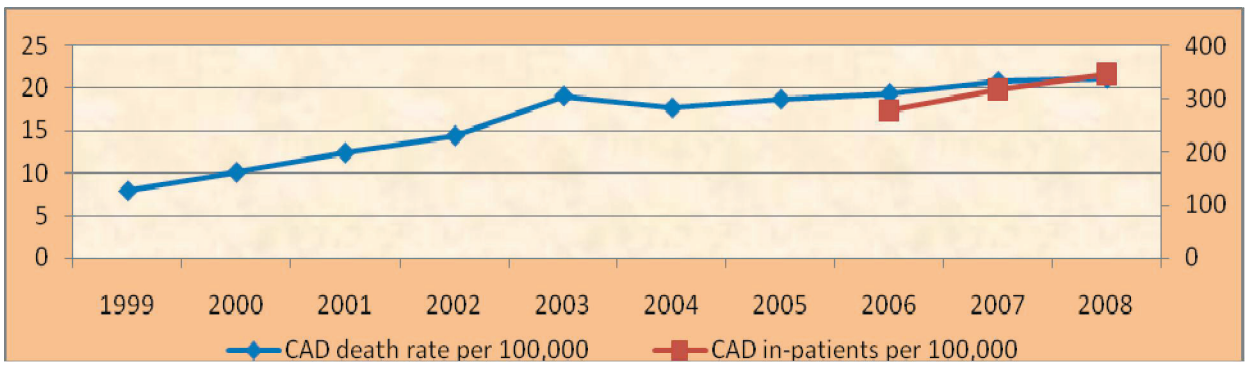
In fiscal years 2006, 2007, 27% and 20% of TB patients were HIV positive. These data are from TB patients who agreed to take a blood test, which made up about half or two-thirds of all the patients. Another problem is drug-resistance. In 2006, 1.6% of new patients developed resistance against several drugs. The proportion was 17% among recurring cases. In 2007, Siriraj Medical School, Mahidol University reported 13 cases of severe drug-resistance.

Coronary artery disease (CAD)

Between 1999-2002, death rate from all kinds of heart disease (ICD 10 Codes I05-09, I20-28, I30-52) dropped, but showed an upward trend since then. As for CAD (ICD 10 Code I20-25), which is induced by risk behaviors, ***the CAD death rate*** tripled from 7.9 per 100,000 population to 21.2 during 1999-2008.

CAD in-patients per 100,000 population increased from 81.9 in 1999 to 276.8 in 2007 (individual-based in-patient data during 2006-2008 also showed an upward trend). Despite improved health care, modern diet and hectic life style, less physical activities, and more stress contribute to rapid proliferation of new cases.

Figure 3.11 Coronary artery disease (CAD)



Source: Bureau of Health Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health

Challenges

The most important challenge regarding ***malaria*** is control over the border area, especially along the Thai-Myanmar border, where there is high population mobility but limited disease control. Most immigrants have malaria infection, which leads to frequent spread of the disease. Another concern is the Falciparum infection commonly found along the Thai-Cambodia border which is highly resistant to many kinds of drug, and is becoming resistant to the drug which is commonly used. Collaboration with neighboring countries on Thailand's 4 borderlines, as well as at the regional and global levels is critical for Thailand's fight against malaria.

Thailand has accelerated the fight against ***Tuberculosis***, by appointing Ms./Mr. TB (TB focal point) in Bangkok and the provinces, focusing on migrant workers, people with chronic diseases, and inmates, developing treatment and care modules for drug-resistant cases, and fostering closer linkage between HIV/AIDS and TB programs. Other measures include capacity development for health personnel at all levels especially the village health volunteers, and improving TB database and reporting.

Combating ***coronary artery disease*** requires an extensive and pro-active health promotion program to reduce health risks such as smoking, high-cholesterol diet, salty food, stress, physical inactivity and hypertension. Early screening for hypertension also leads to early treatment and control of risk factors.

Also important is for the health personnel to balance between treatment by Vasodilators and control of risk factors. Death rate can be curtailed by expanding access to health care, and improving the quality of treatment and referral system.

Goal 7: Ensure Environmental Sustainability

MDG 7A	**Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources**	**Potentially**
MDG 7B	**Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss**	**Potentially**
MDG+	***Increase the share of renewable energy to 8 percent of the commercial final energy by 2011***	***Likely***
MDG+	***Increase the share of municipal waste recycled to 30 percent by 2006***	***Not achieved***

Table 3.31 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. Proportion of land area covered by forest (%)	28.00 (1989)	25.60	33.20	31.40	30.90 (2006)	-	-
2. Ratio of area protected to maintain biological diversity to surface area (%)	12.40	14.80	16.80	18.30	18.80 (2007)	-	-
3. Catch per unit effort on marine resource (kg/hr)	-	-	-	-	32.26	-	-
4. Proportion of species threatened with extinction (%)	-	-	-	11.91	-	-	-
5. Proportion of surface water used (%)	-	-	-	-	26.50 (2009)	-	-
6. Energy consumption per 1,000 bath of GDP (kg. of oil equivalent)	15.40	15.30	15.90	16.20	15.20	-	-
7. Carbon dioxide emission per capita (metric tons)	2.40	3.70	2.30	4.30 (2004)	-	-	-
8. Consumption of ozone-depleting CFCs (metric tons)	7,263	8,314	3,655	1,260	208	-	-

Data sources:
1. Royal Forestry Department
2. Department of National Parks, Wildlife, and Plant Conservation
3. Department of Fisheries
4. Office of Natural Resources and Environmental Policy and Planning
5. Department of Water Resources
6. Office of Energy Policy and Planning, Ministry of Energy
7. Office of Natural Resources and Environmental Policy and Planning
8. Department of Industrial Works
9. National Statistical Office, Household Socio-economic Survey

Table 3.32 MDG+ indicators

MDG+ indicators	2002	2003	2004	2005	2006	2007	2008	MDG+ target
1. Mangrove forest area (sq.km.)	-	-	2,336	-	-	-	2,550	-
2. Proportion of renewable energy in commercial final energy (%)	-	0.50	1.10	2.50	3.90	5.00	6.40	8.00 (2011)
3. Proportion of main rivers that water quality is "fair" or better (%)	65.00	63.00	74.00	66.00	74.00	54.00	76.00	85.00 (2006)
4. Proportion of municipal waste recycled (%)	18.00	19.00	21.00	22.00	22.00	22.00	23.00	30.00 (2006)

Data sources:
1. Department of Marine and Coastal Resources
2. Department of Alternative Energy Development and Efficiency
3-4. Pollution Control Department

Progress Report

Thailand has a potential to attain this MDG goal owing to increased conservation areas and mangrove forest areas, and the successful banning of CFC import. But much remains to be done to reduce reliance on imported energy, and to strengthen the natural resources and the environment which is a fundamental foundation for economic and social development.

Forest area and conserved areas

Forest area has steadily diminished. In 1998, estimation by satellite photos at the scale of 1:250,000 showed 81.08 million rai forest area, or 25.28% of land area. Based on a more refine scale of 1:50,000, the estimation went up to 106.32 million rai or 33.15% of total area in 2000.

Latest estimate in 2006, however, reported only 99.16 million rai, or 30.92%, which is less than the 10th Plan (2007-2011)'s target of 33%. Illegal logging, forest fire, and expanded public infrastructure, e.g. dams and roads, are the main causes of the loss of the forest. To conserve and expand forest areas, it is important to prevent illegal logging and rehabilitate the forest especially within the conserved forest areas. During 2005-2008, afforestation/reforestation averaged only 57,300 rai per year, which is not adequate.

During 2002-2008, legally ***conserved land and marine areas*** to protect biodiversity increased from 18.2% to 18.8% of total area, which exceeded the 10th Plan's target of 18%.

In addition, Thailand values its ***mangrove forest***. During 2000-2004 mangrove areas in 23 coastal provinces dropped from 2,442 sq.km. to 2,336 sq.km. This was partly due to a new classification introduced by the 2004 survey that made a distinction between mangrove forest area and surrounding water area (river, canal, and pond). In 2008 mangrove forest area expanded to 2,500 sq.km. due to the rehabilitation of mangrove areas that had been encroached and converted into shrimp farms, and the project to plant mangrove forest in honor of Queen Sirikit on her 72nd anniversary during the 2002-2008 period. The project target of 1,153.91 sq.km. covers new mangrove areas and replanting and rehabilitation of mangrove in existing areas. Next step is to integrate mangrove forest and fishery management for sustainable future.

Thailand has 61 international ***wetland areas*** and 48 national wetland areas, that cover 21.63 million rai or 6.75% of total area. There are also a large number of wetlands in 111 national park areas, 40 wildlife conservation areas, 30 no-hunting areas. There are also 4 bio-sphere areas with combined areas of 850 sq.km.

Marine resources

A marine resource assessment was conducted in 2004. The ***Maximum Sustainable Yield (MSY)*** for Mackerel, the most important economic fish, was established at 70,581 tons for the Gulf of Thailand and 30,218 tons for the Andaman Sea. In 2007, according to the Department of Fisheries' data, 95,668 tons of Mackerel were harvested from the Gulf and 41,171 tons from the Andaman. It is necessary to reduce the catches to achieve sustainable yield in the long term.

Thailand has collected data on ***Catch per Unit Effort (CPUE)*** since 2006 as an indicator of the abundance of marine resources. Department of Fisheries conducted a study by using trawling net on survey boats in the Gulf and the Andaman Sea during January-June every year. In 2008, CPUE in the Gulf was 25.33 kg./hr. which was higher than the 2006-2007 level. In the Andaman, it was 45.71 kg./hr., higher than 2006 level but lower than 62.23 kg./hr. in 2007. The combined CPUE was 32.26 kg./hr. in 2008, lower than the 2007 CPUE.

At present, government agencies are developing more effective laws and regulations in response to the situation. The strategy is to establish clear and fair fishing zones, to promote fishery co-management, which would pave a way for right-based fishery, and to control the marine harvest in accordance to the condition of the marine resources.

Water resources

In 2009, Thailand had 732,975 million cubic meters of rainfall, part of which evaporated and seeped underground. Remaining surface water was estimated at 213,303 million cubic meters/year. Of this amount, 2,460 million cubic meters or 3.5% was used for consumption, 2,369 million cubic meters or 3.4% for industry and tourism, 51,786 million cubic meters or 75.5% for agriculture and hydropower. The remainder- 12,359 million cubic meters or 17.6% was earmarked for ecological balance. **Total surface water use** (except for ecological balance) was 56,615 cubic meters/year or 26.5% of total surface water.

In 2007, 3.04 million cubic meters of **ground water** was used on a daily basis. More than half was for industry, followed by consumption, agriculture, services, and commerce[8].

Climate change has made rainfall, the main source of water for Thailand, more erratic, resulting in floods and droughts, which in turn lead to conflicts over water resources among users in different sectors and areas. At present, the water management strategy focuses on participatory water basin management, and on managing both the demand and supply of water by combining and balancing the use of surface and ground water.

Endangered species

Thailand ratified the Convention on Biological Diversity on 29 January 2004. To fulfill the Convention's commitment, Thailand assessed the status of the vertebrates in the country (mammals, birds, reptiles, amphibians, and fishes) in accordance with the IUCN Red List Categories version 3.1 (IUCN 2001). With support from UNDP, Thailand completed a compilation of Red Data: Vertebrates in 2005 (rare, endangered and endemic) in 2005 and found that 11.91% of Thailand's ***vertebrates*** were under threat. Another study – Thailand Red Data: Plants, completed in 2006, listed 1,407 species (135 families) of plants. There are 764 endemic species. 880 species were classified as rare species, including 363 vulnerable species and 142 endangered species[9].

Thailand's continued biodiversity loss is due to over-exploitation of the ecological system and changes in natural habitats. Since 1998, Thailand has developed policies, measures, and plans for sustainable use of biodiversity to serve as a framework for conservation and biodiversity management. At present, the 3rd plan (2008-2012) gives priority to the protection of different elements of biodiversity in various ecological systems, and capacity development to implement the International Convention on Biodiversity.

Table 3.33 Registered threatened vertebrates of Thailand

Vertebrates	Number of species in Thailand*	Number of endemic species		Number of threatened species**	
	(number)	(number)	%	(number)	%
Mammals	302	5	1.66	116	38.41
Birds	982	2	0.20	180	18.33
Reptiles	350 (366 forms)	47 (49 forms)	13.39	32 (33 forms)	9.02
Amphibians	137 (138 forms)	7	5.07	5	3.62
Fishes	2,820	72	2.55	215	7.62
Total	**4,591 (4,608 forms)**	**133 (135 forms)**	**2.93**	**548 (549 forms)**	**11.91**

* including extinct species
** including critically endangered, endangered, and vulnerable
Data source: Office of Natural Resources and Environment Policy and Planning, http://chm-thai.onep.go.th/RedData/, accessed 14 December 2009

Energy

In 2008, ***energy consumption per 1,000 Baht of GDP*** which had been on the upward trend started to drop to 15.2 kilograms of oil equivalent (1988 price). But the total volume of energy consumption continued to increase during 2003-2008 from 890,000 million bath or 15% of GDP to 1,500,000 million baht or 18% of GDP. Reliance on fossil-based energy places a heavy toll on the environment and the economy. Hence, the 10th Plan (2007-2011) sets a target to increase the proportion of renewable energy to 8% and reduce energy consumption per GDP, especially to reduce the share of transport in energy consumption from 38% to 30%.

Due to soaring oil prices since the beginning of the decade, Thailand has recognized the need to diversify its energy sources especially renewable energy that is available domestically, such as biomass and biogas, especially community-based renewable energy. Using natural gas in transport and energy conservation is also part of the energy restructuring endeavor. During 2005-2008 the proportion of renewable energy in commercial final energy increased from 2.5% to 6.4%, approaching the MDG+ target of 8% by 2011. The MDG+ target is therefore revised to be 10% by the same year.

Another important policy framework is the 15-year Alternative Energy Development Plan (2008-2025) endorsed by the Cabinet on 28 January 2009. The Plan aims to boost the proportion of alternative energy to 10% and 20% of final energy use by 2011 and 2025 respectively. If successful, the Plan would reduce green gas emission by 42 million tons per year.

At present, important alternative energy development measures are renewable energy adder, support to SMEs, ESCO Fund for energy conservation and alternative energy, provision of infrastructure to support the expansion of alternative energy such as pipeline, biogas storage system, data development and dissemination, standards for alternative energy technology and production, etc.

Green gas emission

Thailand became a signatory to the UN Convention on Climate Change in 1992, and ratified it in 1994. The country signed the Kyoto Protocol in 1999 and calculated its ***carbon dioxide emission*** for the first time in 2000. The emission was 3.7 metric tons per capita. At present, Thailand is working on greenhouse gas accounting for the 2000-2005 period.

To cope with global warming, Thailand prepared the Climate Change Management Strategy (2008-2012). A master plan and action plan is under preparation to enhance the preparedness to cope and make adjustments to the impacts of climate change, to collaborate with the international community to reduce greenhouse gas, and to promote integrative planning and implementation by various parties.

Further, Thailand Greenhouse Gas Management Organization (Public Organization) was established to facilitate clean development mechanism under the Kyoto Protocol. To date, 90 projects have met SD criteria, of which 88 are alternative energy and energy efficiency projects. Twenty-four projects have been registered as CDM projects by the CDM Executive Board.

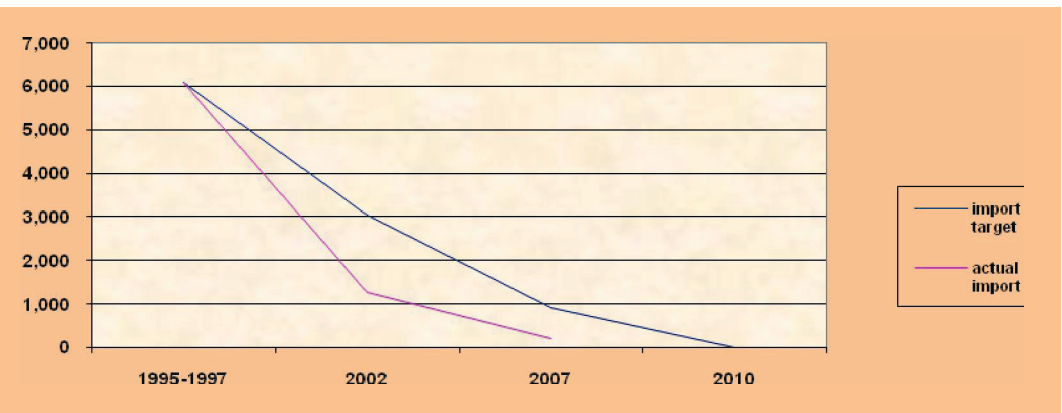
Consumption of ozone-depleting CFCs

Thailand became a party to the Montreal Protocol on Substances that Deplete the Ozone Layers 1987 on 15 September 1988 by pledging accession to the Vienna Convention for the Protection of the Ozone Layer 1985, ratifying the Montreal Protocol on 7 July 1989, and starting to implement the obligations on 5 October 1989. As a developing country, Thailand has an obligation to ensure that by 1999, ***the use of CFCs*** would not exceed the average consumption volume during 1995-1997, which is considered the baseline, and to reduce the use by 50% by 2005, by 85% by 2007, and to adopt a total import ban by 2010.

Thailand calculated its CFCs consumption from the volume of imported CFCs. Baseline data in 1995-1997 was 6,082 metric tons. This means that Thailand must limit its CFCs import to 3,041 metric tons in 2005, 912 metric tons in 2007, and 0 in 2010. Record shows that Thailand imported CFCs in the amount of 1,260 metric tons in 2005, 322 metric tons in 2007, and 208 metric tons in 2008, which were well below the targets.

Such success was owed to collaboration between government agencies and the private sector, especially Department of Industrial Works that used legal measures and other support measures to help the Thai industry made the adjustment.

Figure 3.12 Target and actual import of CFCs, 1995-2010



Source: Department of Industrial Works

Water quality

This report introduces a new water quality indicator that incorporates all quality dimensions. A survey on quality standards for surface water and general water quality index (WQI) found that overall water quality improved during 2003-2008. This is based on ***the proportion of main rivers of which water quality is fair or better***. Community waste water is the most important polluter. Other

waste directly discharged into water sources such industrial and agricultural waste water also contribute to the problem.

Important initiatives to curb water pollution include awareness campaign, community waste water treatment system, and clean technology for industrial and agricultural sectors. The 10th Plan (2007-2011) emphasizes law enforcement and control of pollution at the sources, use of economic and social measures such as conservation incentives, all of which should result in overall improvement of the surface water quality. The 10th Plan and the Environmental Management Plan (2007-2011) ***set an 85% target to maintain the quality of surface water in 85% of all water basins and natural sources at the "fair" and "good" level. This commitment is therefore reiterated as a MDG+ target.***

Waste management

Approximately 38% of municipal waste in the country is properly managed. 91% of this amount is from Bangkok, Pattaya City, and municipal areas. The remaining 9% is from Sub-district administrative Organizations. Most municipal waste is not handled according to sanitary standard; common practices are outdoor dumping, outdoor burning, and land filling.

In the past 5 years, the agencies concerned have stepped up an effort to reduce, separate and recycle municipal waste by enhancing the capacity of local administrative organizations, developing 3Rs legislation, regulation and strategy, strengthening the capacity of individuals, companies, and government agencies involved. As a consequence, ***the proportion of municipal waste recycled increased from 18% in 2002 to 22% in 2007, but missed the 2006 target of 30% which was the MDG+ and the 9th Plan target. This target was reconfirmed with the timeframe extended to 2011 by the 10th Plan.***

In addition, the 15-Year Alternative Energy Development Plan also aims to produce alternative energy from municipal waste, which would enhance energy stability as well as manage municipal waste. At present, power generated by municipal waste is estimated at 5 megawatts, including biogas generated by fermenting organic waste that replaces liquid petroleum in the cooking process.

Next step is to develop an integrated municipal waste management system based on the 3Rs principals (Reduce Reuse and Recycle). The key is to control the quantity of municipal waste at the sources, promote the use of natural and biodegradable materials and increase the efficiency of separation and reuse of municipal waste prior to the final treatment. Another important measure is to introduce measures to curb the use of polluting and non-degradable materials.

Challenges

Although Thailand has adopted national policies and plans to curb the loss of natural resources and the environment and biodiversity, overall situation on natural resources and the environment has not improved. Thailand also faces pressure from external factors, e.g. climate change, international trade barriers, global energy crises, to adopt a new strategy in managing natural resources and the environment. Key issues that need serious attention in the next 5 years are as follow.

1. ***Promote the awareness and consciousness for collective responsibility to cope with internal and external risks*** that could lead to socio-economic and environmental changes, especially climate change. Shifting the economic structure toward a Green Economy is a key strategy. Other important measures are integrating biodiversity into development planning, supporting environmental-friendly production and investment, e.g. low-carbon production by switching to biomass/biogas energy, alternative energy, reducing the role of high-carbon industries and products by curtailing the use of plastic, chemical products, promoting clean, environmental-friendly production and consumption, disseminating

best practices for behavioral changes and impact mitigation.

2. ***Enhance national energy security and further develop renewable and alternative energy***. Renewable energy should be promoted to become a main source of energy in the future. This involves expanding the production and use of clean energy, reducing the use of fuel energy, developing knowledge and know-how to manage waste from energy production process, as well as minimizing impacts on the environment and the communities.

3. ***Develop an integrated policy and management approach***. The emphasis should be on minimizing pollution, maximizing waste reuse and recycling prior to final treatment, to ensure that resources are used effectively and efficiently.

4. ***Promote the participation of all sectors in the management of natural resources and the environment*** from the policy to implementation level. Networking at national, provincial and local levels to coordinate the management, access and use of water, forest and marine resources could enhance the effectiveness of the policies and plans as well as reduce potential conflicts. It is important to disseminate information and knowledge about the principles of natural resources and environmental management to all sectors especially in the conserved areas. More resources are needed for the rehabilitation and expansion of forest areas and marine resources.

5. ***Consolidate water management.*** It is high time to consolidate water management authorities into an integrated system, with an emphasis on water basin management, land use zoning, and mitigating droughts and floods over the long run.

6. ***Develop and promote the use of economic and social measures for efficient environmental management.*** Examples of social measures are public disclosure, corporation responsibility. Examples of economic measures are environmental tax, other fiscal and financial measures. These should be supplemented by introducing new legal measures, and bringing existing measures in line with changing social situation.

MDG 7C	**Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation**	**Achieved**

Table 3.34 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. Proportion of urban households with sustainable access to an improved water source (%)	96.50	-	97.00	96.30	-	98.20 (2015)	-
2. Proportion of rural households with sustainable access to an improved water source (%)	76.40	-	91.00	87.00	-	88.20 (2015)	-
3. Proportion of urban households with access to improved sanitation (%)	99.00	-	99.50	99.60	-	99.50 (2015)	-
4. Proportion of urban households with access to improved sanitation (%)	83.10	-	97.00	98.60	-	91.50 (2015)	-

Data source: National Statistical Office, Population and Housing Census 1990, 2000; Survey of Population Change 2005-2006

Progress Report

Although some indicators are slightly off target, the overall coverage is very high - near universal, ***this target is therefore considered "achieved".***

Access to improved drinking water

In 2005, 89.9% of the people had ***access to improved drinking water***. Shortage was reported in some rural, highland and remote areas. During 2000-2005, access to improved drinking water declined slightly in the urban areas. In rural areas, it also dropped from 91% to 87%[10]. This may be due to the problem incurred when this responsibility was transferred to local administrative organizations, some of which were not ready for the hand-over. A survey by the Department of Water Resources revealed that of the total of 74,944 villages, 6,491 did not have pipe water, and the system was out of order in 18,267 villages. Several agencies have joined hands to solve this problem[11].

The quality of drinking water continues to be problematic. Department of Disease Control's surveillance shows that water-borne diseases such as diarrhea, dysentery, typhoid and parasite are still the country's major health problems. Acute diarrhea also shows no sign of receding. Each year, reported cases of diarrhea are in excess of 1 million.

Department of Health's survey on household's drinking water during 1998-2003 and 2007-2008 revealed that 50.4% of pipe water in urban areas and 81.1% in rural areas failed to meet the standard. In addition, most rain water, underground water, and water in shallow wells were not of good quality either. Common problems were bacteria and chemical (hardness, nitrate, zinc, lead, manganese, iron, fluoride) contamination. The water was not clear and colored beyond the standard. ***This has led to a new MDG+ indicator – the proportion of population with access to drinking water that meets the standard.***

Improved sanitation

At present, 99% of Thai households, 99.6% of the urban households and 98.6% of the rural households, have ***improved sanitation***.

The attention has turned to **public toilets**. In 2006, a survey by Department of Health revealed that only 9.08% of public toilets met the sanitary standard. Other problems are lack of facilities for the disabled, elderly and pregnant women. Some are located in isolated and unsafe areas. A study found fecal coliform bacteria at important contact points in public toilets, which could lead to digestive diseases such as diarrhea, dysentery, typhoid, cholera, and parasite.

Challenges

Thailand scores high on coverage of improved drinking water and improved sanitation. Future challenges lie in quality improvement, especially on these issues.

1. ***Upgrade the quality of drinking water in both the urban and rural areas to the standard.***

2. ***Expand the pipe water network*** through collaboration among the agencies concerned and local administrative organizations. Highland and remote areas should also be included in the plan.

3. ***Improve public toilets.*** The agencies concerned and local administrative organizations should collaborate to ensure that the facilities meet the HAS (Healthy, Accessibility, and Safety) standard.

4. ***Integrate health and hygiene knowledge*** in formal and informal education.

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[10] The decline may be due to the reference to two different surveys that use slightly different methodologies and definitions.

[11] **Bangkok Thurakij**, 13 August 2009.

MDG 7D	By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	Likely

Table 3.35 MDG indicators

MDG indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. Proportion of population having housing security (%)	94.40	-	93.60	92.30	-	-	-
2. Proportion of urban population having housing security (%)	87.80	-	91.20	88.60	-	-	-
3. Proportion of rural population having housing security (%)	96.00	-	94.80	94.00	-	-	-

Data source: National Statistical Office, Population and Housing Censes, 1990, 2000; Survey of Population Change 1995-6

Progress Report

According to the Population and Housing Census 2000, only 7.6% of all households, 5.2% in urban areas and 8.8% in rural areas, lived in houses built with non-permanent or used materials. Housing durability is therefore not a major problem for Thai households especially for urban dwellers. In addition, most urban and rural households have access to improved drinking water and sanitation. A more serious concern is housing security.

Housing security

"Housing security" is defined differently by many agencies and surveys[12]. Here, it means owning house and land, owning house on rented land, hire purchasing house, and renting house, while not having housing security means owning house on public land, rent paid by other, living rent free.

In 2005/06, 92.3% of Thai people had housing security. More rural population had housing security than urban population. 87.4% of rural households lived in their own house on their own land, compared with 55.6% of urban population. 26.9% of urban population rented their housing[13].

Low-income communities in urban areas

In 2006 the National Statistical Office (NSO) estimated from surveys that there were 1.28 million low-income communities in congested communities, urban communities, suburban communities. Of this number, about 900,000 were located in Bangkok and vicinities[14]. They have less housing security than the rest of the population. 39.5% lived in their own house on their own land, or their relative's land. But some lived on public land, encroached land. 25.9% lived in their own house on leasehold, rented or hire purchased land. 29.6% lived in rented house, room, divided rented room. 4.9% lived rent free.

A survey indicates that the support these communities needed most were occupational loan (12.7%), low-interested loan (12.3%), education scholarship (10.8%), land for housing (10.6%), low-budget housing (10.4%), and long-term and low-cost rental arrangement (6.2%)[15].

[12] The Census 1990 and 2000 classified types living tenure to be 1) owned, 2) hire purchased, 3) rented, 4) rent-free as part of employment arrangement, 5) rent-free. Thailand MDG Report 2004 applied the MDG definition to define 1)-3) as having housing security and 4)-5) as not having housing security.

[13] Based on the Household Socio-economic Survey 2008, 93.3% of population had housing security (own, hire purchase, rent), 89.6% urban, and 95.2% rural.

[14] National Statistical Office, Summary of Survey on Characteristics of Population and Society in Low-income Communities in Bangkok Metropolis, Bangkok Vicinity, Central Region, Northern Region, Northeastern Region, Southern Region, 2006. (Survey conducted in Bangkok, 5 vicinity provinces, and 13 other provinces (top three/four province in each region).

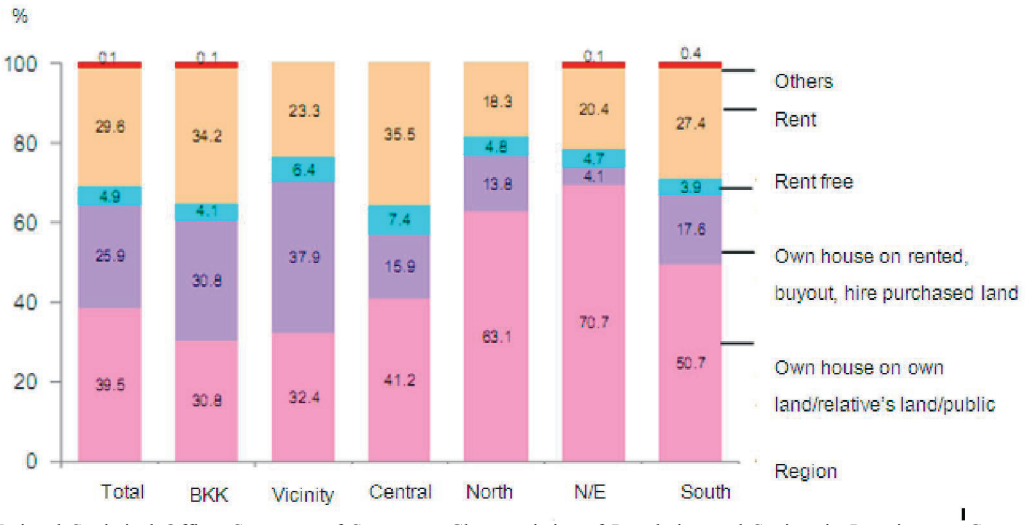
[15] National Statistical Office, Key Issues: Results of Surveys and Census 2006, 2007, p. 68.

Table 3.36 Households by tenure of living quarters by area, 2005-2006

Type of tenure (%)	Kingdom	Municipal	Non-municipal
Own house on own land	77.40	55.60	87.40
Own house on rented land	3.00	4.90	2.10
Own house on public land	1.50	2.00	1.30
Hire purchase	0.50	1.20	0.20
Rent	11.40	26.90	4.30
Rent paid by other	0.50	0.70	0.40
Rent free	5.70	8.70	4.30
Total	**100.00**	**100.00**	**100.00**

Data source: National Statistical Office, Survey of Population Change 2005-2006

Figure 3.13 Tenure of living quarters of low-income communities in 19 provinces by region



Source: National Statistical Office, Summary of Survey on Characteristics of Population and Society in Low-income Communities in Bangkok Metropolis, Bangkok Vicinity, Central Region, Northern Region, Northeastern Region, Southern Region, 2006.

There is another estimate. Based on a survey by the Housing Authority of Thailand in 2000 which was updated in 2002, the Community Organization Development Institute (Public Organization) under the Ministry of Social Development and Human Security estimated that all over the country there were 5,500 congested communities and low-income communities where 1.5 million households, or 6.75 million people were located. In addition, an estimated 1.5 million poor people lived outside these communities. Some were homeless people, factory employees and construction workers. The total number of the urban poor having housing difficulty added up to 8.25 million, or 1.87 million households, or 37% of urban population. Of this number, 3,750 communities or 1.14 million households did not have housing security as they lived on public land, temple land, private land, and were facing different levels of risk including eviction. This is due to rapid urban expansion, and unequal development especially in terms of basic infrastructure and management[16].

[16] Community Organization Development Institute (Public Organization), www.codi.or.th , accessed 10 October 2009.

Box 3.6 Ban Munkong Project

Ban Munkong Project

Since 2003, the Community Organizations Development Institute (CODI) launched the Ban Munkong project based on community-centered development approach that integrates physical, economic, social, environmental and community welfare aspects for the purpose of improving the quality of life of the urban poor.

Until now, this project has brought about diverse community and housing development in 260 districts/cities in 76 provinces, covering approximately 1,300 communities (80,000 households). 66.4% involved refurbishing or building new structure on the same land, 11.2% relocating to a nearby area, 22% moving out of the area, and 0.3% was the case of low-rent/shared living arrangement. In 37.4% of the cases, the families had land titles, 42.9% had long-term land rent agreement, 9.3% had short-term land rent agreement, and 10.3% had permission to build the house.

In 2009, the Government aimed to use this project to upgrade the quality of life of 200,000 households in congested communities under the Strengthening Thailand Program.

Community Organizations Development Institute (Public Organization), www.codi.or.th, accessed 10 October 2009

Challenges

Both reactive and pro-active approaches are needed to enhance housing security.

1. ***Expand the integrated housing and environment development program for congested communities,*** taking into account diverse characteristics and livelihoods of people in different areas.

2. ***Plan housing, infrastructure and environmental development for low-income communities in fast-growing areas*** to prevent encroachment, congestion problems.

Goal 8: Develop a Global Partnership for Development

MDG 8B	Address the special needs of the least developed countries	Achieved

Table 3.37 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	MDG target	MDG+ target
1. Value of ODA (million bath)	-	4,250 (1996)	6,688 (2002/03)	8,064 (2004)	6,014 (2007/08)	-	-
2. Value of ODA (million US$)	-	170 (1996)	167 (2002/03)	202 (2004)	172 (2007/08)	-	-
3. Proportion of ODA to GNP (%)	-	0.13	0.13 (2002/03)	0.19 (2004)	0.10 (2007/08)	-	-
4. Proportion of grants to ODA (%)	-	12.00 (1996)	12.00 (2002/03)	13.00 (2004)	20.00 (2007/08)	-	-
5. Proportion of loans to ODA (%)	-	88.00 (1996)	88.00 (2002/03)	87.00 (2004)	80.00 (2007/08)	-	-
6. Proportion of OAD to least developed countries (%)	-	95.00 (1996)	90.00 (2002/03)	90.00 (2004)	90.00 (2007/08)	-	-

Data source: Thailand International Development Cooperation Agency, Thailand's Official Development Assistance Report 2007-2008

Progress Report

Thailand launched the Official Development Assistance (ODA) program in 1992, of which a large part was grants in the form of technical assistance through training and scholarships for national development. In 2006, the ODA reached 4,250 million baht, over 90% of which was for least developed countries namely Cambodia, Laos, and Myanmar – Thailand's neighbors. The value expanded to 8,064 million baht or 0.19% of the GNP in 2004, but dropped to 6,014 million baht or 0.10% of GNP in 2007/08. This consisted of 20% grants and 80% concessional loans.

Thailand's ODA to neighboring countries aims to promote health and education, combat human and drug trafficking, and develop roads, dams, electricity networks and other infrastructure projects, and to support the integration of the GMS sub-region.

Challenges

Thailand International Development Cooperation Agency's strategy focuses on the promotion of North-South-South and South-South collaboration, regional and sub-regional integration as well as sharing Thailand's development experiences including public-private partnership and people-to-people cooperation.

MDG 8E	In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	Achieved

Table 3.38 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	2009	MDG target	MDG+ target
Population with health insurance (%)	-	-	-	96.25	99.16	99.08	-	-
Data source: National Health Security Office								

Progress Report

The past decade witnessed a major reform of the health insurance system. The Universal Health Care (UHC), the largest health insurance system in the country was launched during 2001-2002. The system provides a range of health care from prevention, promotion, curative to rehabilitation. During 2006-2007, the UHC covered 47.4 million people, while about 5 millions were entitled to medical care system for civil servants and families, and 9.6 million private sector employees were covered by the Social Security System. In 2009, 62.84 million or 99.08% of Thai people were covered by some kind of health insurance. There were 581,174 people who were also entitled but did not register for the benefit.

To make essential drugs more affordable, during 2006-2007 the Ministry of Public Health initiated compulsory licensing on 3 types of drug, two of which were ARV, resulting in a triple-fold increase in the number of AIDS patients having access to the drug. Another case was anticoagulants for heart disease patients. The drug was distributed through public hospital network which made it more accessible to the patients, compared with only 10% accessibility prior to the compulsory licensing. In 2008, the Government expanded compulsory licensing to 4 cancer drugs. The procedure was endorsed by WHO to be in accordance with the Thai and international laws[17].

Challenges

The UHC provides an important access to drugs and health services that are vital to the quality of life of the population. Future challenges lie in the followings.

1. ***Expand public communications and follow-up on problematic groups,*** e.g. newborns, laid-offs, civil servants' off springs who have lost health benefits, to ensure that they are covered by the UHC. Measures to be considered include advance registration for private employees who will lose their social security benefit 6 months after they are laid-off, or arrangement for civil servants' off springs who lose their family health coverage at certain ages to make an easy and quick transfer to the UHC scheme.

2. ***Maintain and improve the standard of services,*** especially in the rural areas.

3. ***Narrow the gaps or the difference in benefits among different health insurance schemes.***

4. ***Strengthen the financial security of the health insurance systems over the long run.*** This is a major challenge for every society particularly Thailand, as the country is heading toward an ageing society in which the demand for health care will expand considerably and rapidly.

[17] Churnrurtai Kanchanachitraet al., Thai-Health 2009, Institute of Population and Social Research, Mahidol University, and Thai Health Promotion Foundation, pp. 50-53.

Table 3.39 Population registered under different health insurance schemes, fiscal years 2002-June 2009

Scheme	2002	2003	2004	2005	2006	2007	2008	2009 (as of June)
Universal health care	45,352,811	45,972,011	47,099,766	47,343,401	47,542,982	46,672,613	46,949,267	47,440,530
Social security	7,121,147	8,086,115	8,340,006	8,741,658	8,200,443	9,581,741	9,835,528	9,620,511
Civil servants/state enterprise employees	4,045,992	4,024,588	4,267,324	4,151,495	4,061,220	5,132,556	5,002,106	4,968,672
Veterans	-	-	-	122,679	122,347	131,272	128,150	125,403
Private school teachers	-	-	-	95,158	109,758	111,047	109,225	107,848
Non-registered	4,600,780	4,366,355	2,830,301	2,356,963	1,357,460	779,263	522,352	581,174
Total population with health insurance	**61,120,730**	**62,449,069**	**62,537,397**	**62,811,354**	**62,394,210**	**62,408,492**	**62,546,628**	**62,844,138**
Health insurance coverage (1+2+3+4+5)	56,519,950	58,082,714	59,707,096	60,454,391	61,036,750	61,629,229	62,024,276	62,262,964
% = (8x100)/7	**92.47**	**93.01**	**95.47**	**96.25**	**97.82**	**98.75**	**99.16**	**99.08**
Persons awaiting status confirmation					453,740	897,371	1,156,404	1,172,023
Overseas Thais	33,134	32,454	63,269	62,713	60,013	57,020	55,167	13,790
Aliens			255,685	274,671	282,520	299,929	312,888	322,346
Total	**33,134**	**32,454**	**318,954**	**337,384**	**796,273**	**1,254,320**	**1,524,459**	**1,508,159**
Total population	**61,153,864**	**62,481,523**	**62,856,351**	**63,148,738**	**63,190,483**	**63,662,812**	**64,071,087**	**64,352,297**
Data source: Fund Management Office, National Health Security Office, June 2009								

MDG 8F	**In cooperation with the private sector, make available the benefits of new technologies, especially information and communications**	**Achieved**

Table 3.40 MDGs indicators

MDG indicators	1990	1995	2000	2005	2008	2009	MDG target	MDG+ target
1. Telephone line per 100 population (lines)	-	-	-	10.80	10.60	-	-	-
2. Cellular subscribers per 100 population (persons)	-	-	-	48.20	92.00	-	-	-
3. Internet users per 100 population (persons)	-	-	-	11.30	15.60	-	-	-
Data source: National Telecommunications Commission, Annual Report 2008								

Progress Report

Telecommunication networks that provide equal access play an important part in narrowing the communication and knowledge gap. Telecommunications especially mobile phones have expanded rapidly in the past decade.

While the ***access ratio for fixed line telephone*** remained stagnant at 10-11 lines per 100 population, ***access ratio for cellular phone*** doubled from 48.2 subscribers to 92.0 per 100 population during 2005-2008. During this period, **internet users** increased from 11.3 to 15.6 per 100 population.

At present, limited fixed line coverage represents an obstacle to the expansion of internet users, especially in the rural areas. A Survey on the Use of ICT (Household) by NSO in 2008 indicated that 18.7% of population 6 years old and over had access and used internet, a sharp increase from 12% in 2005. But the urban-rural gap was noticeable. 28.96% of urban population used internet, compared with 13.38% in the rural areas.

Challenges

The National Telecommunications Commission (NTC) was established in 2004 to regulate this fast-growing sector. In the following year, the NTC unveiled a three-year telecommunication master plan. The 2nd master plan (2008-2010) stipulates several objectives including ***expanding access and ensuring that the benefits of ICT are distributed widely and equitably.*** One of the targets of the master plan is to extend basic ICT infrastructure to the rural areas, especially schools, health centers, religious centers, and social service units.

Another challenge is to ***protect the consumers;*** consumers should receive quality service at fair prices. The NTC has established the Telecommunications Consumer Protection Institute to protect the consumers' rights and to strengthen consumer organizations.

Challenges and the Way Forward

A decade after the Millennium Development Declaration, Thailand has continued to make steady progress towards the MDG targets amid internal and external challenges. The strength and resilience of the Thai society will constitute an important foundation for further advancement. In upcoming years, the focus should be on these remaining challenges:

- Reduce poverty especially in the Northeast, the North, and the three Southernmost provinces,
- Improve the quality of education,
- Increase the role of women in decision-making in all sectors and at all levels,
- Improve maternal and child health, especially in highland areas in the North, and the three Southernmost provinces,
- Expand access to reproductive health services to all population groups,
- Halt and prevent the revival of HIV infection and TB,
- Expand health promotion to counter the threat of cancer and coronary artery disease.
- Enhance the effectiveness of natural resource and environmental management for sustainability.

Special attention should be on **areas and population groups that are relatively deprived from sharing the development benefits, as well as vulnerable groups.**

- **The Northeast** has been priority area for poverty alleviation, and the result has been impressive. At present poverty incidence in the Northeast is only slightly higher than that of **the North**. The two regions share a similar problem – poverty in the farm sector. Protection from extreme fluctuations in the agricultural sector and increased agricultural productivity are therefore very crucial for combating poverty in these areas.
- **Highland areas in the North** have outstanding deprivation pattern. Difficult terrain represents a major barrier to health and social services, especially those concerning maternal and child health which shows relatively slow progress.
- **Three provinces in the deep South** is another remote area with special characteristics in terms of religion, language and culture. The population faces several constraints in accessing health and social services, especially maternal and child health. In the past 5 years, unrest and violence in the area has drawn attention of and resources from many government agencies, but it has also become an important obstacle to the expansion of services.
- **The elderly** is a population group that is expanding rapidly and facing poverty and health risks. Most vulnerable group is rural elderly who are taking care of young children and those who live alone.
- **Adolescent and the youth** are most exposed to cultural and social changes. They are high risk group in terms of reproductive health and HIV infection.
- **Female and male sex workers, injecting drug users, and men who have sex with men** have stubborn or increasing rates of HIV infection in the past 5 years. They face indifference or discrimination from the society, which makes them the most inaccessible groups for prevention and treatment.
- **Migrant workers and stateless persons**. In the past decade, there has been remarkable progress in the management and protection of migrant workers and stateless

persons. Nevertheless, it is important to establish a clear long-term policy and an integrated database on various aspects of migrant workers and stateless persons to support a sustainable management system that would enhance the quality of life of these population groups.

Chapter 3 repeatedly identifies cross-cutting issues that constitute **critical success factors for improving the quality of life of these areas and population groups**. They are:

- **Area-based, population group-based policy, measure and budget.** Development experiences from areas and population groups that have distinctive physical, ethnic, cultural backgrounds, e.g. highland peoples, the deep South, confirm that specific policies and measures that are sensitive to these factors are needed.

- **High-quality and integrated data system**. Data are essential input for formulating policies, strategies, measures, as well as for allocating resources. Yet, data continue to be an important challenge. There are diverse data sources. On-going endeavors to improve the data system and administrative changes have occasionally led to temporary data gaps. The most difficult type of data gap concerns some areas, some population groups whose lifestyle and behaviors lie outside the realm of the law or the social norms, e.g. those having pre-marital sex, abortion, sex workers, non-mainstream gender groups, drug addicts, migrants. Expanding the data system to have the representation of area, sex, and vulnerable groups would help identify real problems and appropriate solutions. Linkages between national and area-based data are also very important as local and area-based organizations are assuming a more important role in development.

- **Empowerment of provincial authorities, local administrative organizations, and community organizations to spearhead a bottom-up, areas-based development.** At present, most development problems are area and population specific. Line agencies are adjusting policies and measures to accommodate these specificities. But it is the provincial authorities, local administrative organizations, and community organizations that can best prioritize and solve problems in each locality. Line agencies must empower and support these organizations in analyzing problems, planning development programs/activities, collecting data to evaluate progress, with an aim to maintain the quality and standard of services.

- **Capacity development and good coordination system to enhance the quality of social services.** By and large, Thailand's MDG drive especially in nutrition, gender equality, maternal and child health, drinking water, sanitation, and housing is primarily an attempt to shift from quantitative to quality improvement. At the national level, such quality improvement can be achieved by formulating appropriate policies, strategies and measures. At the implementation level, key success factor is capacity development of service providers and a good coordination system among agencies and organizations concerned, horizontally and vertically.

- **Social norms that embrace social diversity and value the participation of women in politics and administration**. Respect for human rights, human dignity, participation, and diversity in terms of race, nationality, religion, gender, etc, is most crucial among policy-makers, social and health service providers. The society must support women to participate actively in policy-making at national and local levels.

In addition, the MDGs drive should take place in parallel with an endeavor to maintain overall progress in economic and social development. Important issues for sustaining such development are as follow.

- **Social protection system for all population groups.** An effective measure to reduce poverty and safeguard people's well-being from internal and external risks is social protection that covers all, especially the most vulnerable groups, i.e. informal

workers, most of whom are in the farm sector. Although they are covered by the universal health care, they do not benefit from most protections under the labor law including the social security system. A suitable approach is to strengthen the community self-help system to provide social protection all over the country.

- **Further advancement on the basis of knowledge-based development, sufficiency, and sustainability.** Experiences from the past decade have led Thailand to give more emphasis on knowledge-based development, sufficiency, and sustainability. All parties agree that education reform is the most critical challenge. Besides improving the quality of life of the people, quality education will play an important role in economic and social restructuring toward a knowledge-based society, which will reduce the dependency on production-based economy which has exploited the natural resource base beyond the sustainability level.

- **Preparation for the ageing society.** The Thai society has made preparation for the ageing society by developing two important systems- the social protection system and the health care system to ensure that the elderly would live a quality and dignified lives. Both systems represent a formidable challenge in terms of coverage, quality of service, and long-term fiscal implication on the government. In any case, care given by the Government should be secondary and supplementary, and should not replace family and community care as family and community bonding is a fundamental basis of the Thai society.

- **A care, sharing, and equitable society.** A starting point for reduction of social inequality is a recognition that inequality is not a problem that is specific to any group, any area, and that everyone should help tackle the problem for the well-being of the society in the long run. To a certain extent, the MDG process has contributed to raising the awareness and attention on disadvantaged groups and deprived areas.

- **Preparation to cope with internal and external risks.** The past decade has unraveled upcoming economic, social, environmental challenges which are likely to continue and intensify both in terms of frequency and severity, e.g. fluctuations in the world economy, epidemics, especially emerging infectious diseases, terrorism, natural disasters. Most important is climate change which will have a multitude of direct and indirect impacts. Internal risks include chronic or sudden risks, such as financial and fiscal crises, political instability, HIV/AIDS, crimes, drug. These risks can rapidly undermine the progress that has accumulated over the years. Hence, the society should assess these risks and prepare coping strategies that include promoting understanding among the public and engaging all population groups in this process.

Appendix
MDGs and MDG+ Tables
1990-2008

Poverty and Hunger	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Data Source
Proportion of population below the poverty line (expenditure-based) (%)	**33.69**		28.43		18.98		14.75		17.46		**20.98**		14.93		11.16		9.55	8.48	8.95	NESDB
Poverty incidence in the Northeast (expenditure-based) (%)	***46.09***		*41.14*		*28.07*		*24.54*		*30.67*		***35.34***		*23.06*		*18.58*		*16.77*	*13.05*	*14.62*	
Proportion of population below the poverty line in Yala Province (expenditure-based) (%)													*15.21*		*7.76*		*6.71*	*7.53*	*7.11*	
Proportion of population below the poverty line in Pattani Province (expenditure-based) (%)													*21.09*		*20.54*		*16.31*	*19.72*	*20.68*	
Proportion of population below the poverty line in Narathiwat Province (expenditure-based) (%)													*42.25*		*14.78*		*27.05*	*20.02*	*12.83*	
Poverty gap ratio	**8.05**		6.62		3.92		2.85		3.35		**4.24**		2.75		2.01		1.81	1.45	1.49	
Poverty severity	***2.82***		*2.23*		*1.22*		*0.85*		*0.99*		***1.3***		*0.81*		*0.56*		*0.53*	*0.41*	*0.41*	
Share of poorest quintile in individual household expenditure (%)	**6**		5.75		6.05		6.10		6.49		**6.15**		6.32		6.17		6.15		6.64	NSO
Growth rate of GDP per person employed (%)												2.27	4.68	3.66	3.09	**4.01**	3.28	0.4	2.27	NESDB
Employment-to-population ratio												51.01	52.1	52.87	53.36	**54.15**	54.67	55.14	55.81	NSO
Proportion of employed persons under the poverty line (%)													16.2		11.17		9	8.1	8.63	NESDB
Proportion of own-account and contributing family workers in total employment (%)												53.79	54.47	53.22	51.26	**50.64**	51.71	51.71	52.2	NSO
Proportion of population below food poverty line (expenditure-based) (%)	**2.44**		2.49		1.06		1.14		1.36		**1.76**		0.84		0.62		0.92	0.65	0.80	NESDB
Proportion of population aged over 20 below minimum level of dietary energy consumption (%)						***25***								*10.1*						*Department of Health (Nutrition Survey)*
Underweight children under five years old (%)	**41.68 (1986)**					**31.3**							29.1/11.3*				9.3 **			*Department of Health (Nutrition Survey) ** MIC survey*
Underweight hill tribe children (%)												**36.0*			**37.5*		*26.8*			*Highland Health Center (survey data)*
Households using iodized salt (%)																		*83.5*	*85.4*	*Department of Health*
Iodine deficiency among pregnant women (%)													*71.4*	*65.4*	*74.9*		*57.4*	*46.9*	*58.5*	*ICCIDD, External Expert's Review of the Project to Eliminate Iodine Defficiency in Thailand, 2009*
Children 6-14 years old with iron deficiency (%)						***50.99***								*30.56*						*Department of Health (Nutrition Survey)*

**based on new national growh standard*

Education	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Data Source
Net enrolment in primary education (%)			70.1		70.8		77.1		80.4											Ministry of Education
Gross enrolment in primary education (%)			99.2	97.3	93.8	**103.4**	103	103.1	102.6	102.4	**103.2**	103.8	104.8	104.5	104.2	**104.2**	103.5	104.5	104.8	
Retention rate in primary education (%)						**85.9**					**87.14**	87.6	88.4	89.5	90.1	**90.4**				
Net enrolment in lower secondary education (%)			*31.3(a)*		*35.9*		*48.1(a)*		*48.4(b)*					*69.2*	*79.1*					
Gross enrolment in lower secondary education (%)			*50.6*	*57.1*	*63.4*	***73.1***	*78.2*	*81.8*	*83.4*	*83.5*	***82.8***	*82.2*	*82.2*	*84.0*	*92.5*	***95.5***	*96.7*	*96.4*	*95.6*	
Retention rate in lower secondary education (%)										*62.7*					*74.6*	***74.4***				
Net enrolment in upper secondary education (%)											***33.0***	*33.3*	*34.3*	*34.6*	*37.0*	***40.2***				
Gross enrolment in upper secondary education (%)			*26.9*	*30*	*33.7*	***39.2***	*44*	*49.3*	*51.9*	*55.3*	***57.3***	*59.3*	*54.8*	*58.7*	*63.8*	***63.8***	*65.8*	*67.2*	*68.1*	
Retention rate in upper secondary education (%)													*42.3*					*51.1*	*52.8*	
Students' average test score in primary education (%)																				
Thai												*54.4*	*50.6*	*45.3*	*44.2*	***n.a.****	*42.7*	*36.6*	*42.0*	
Mathematics												*47.0*	*49.9*	*41.7*	*43.8*	***n.a.****	*38.9*	*47.6*	*43.8*	
English												*49.6*	*47.4*	*41.1*	*37.3*	***n.a.****	*34.5*	*38.7*	*37.8*	
Science												*n.a.**	*n.a.**	*42.4*	*41.6*	***n.a.****	*43.2*	*49.6*	*51.7*	
Students' average test score in lower secondary education (%)																				
Thai												*46.3*	*46.7*	*54.0*	*38.3*	***n.a.****	*43.9*	*48.1*	*41.0*	
Mathematics												*32.4*	*39.1*	*35.0*	*34.9*	***n.a.****	*31.2*	*34.7*	*32.6*	
English												*39.0*	*45.3*	*37.9*	*32.3*	***n.a.****	*30.9*	*28.7*	*34.6*	
Science												*n.a.**	*n.a.**	*38.1*	*37.2*	***n.a.****	*39.3*	*35.2*	*39.4*	
Social Studies												*n.a.**	*n.a.**	*49.0*	*42.4*	***n.a.****	*41.7*	*41.8*	*41.4*	
Students' average test score in upper secondary education (%)																				
Thai												*n.a.**	*n.a.**	*44.5*	*49.3*	***48.6***	*50.3*	*50.7*	*46.4*	
Mathematics												*n.a.**	*n.a.**	*34.0*	*35.1*	***28.5***	*29.6*	*32.5*	*36.0*	
English												*n.a.**	*n.a.**	*39.1*	*32.5*	***29.5***	*32.4*	*30.9*	*30.7*	
Social Studies												*n.a.**	*n.a.**	*41.9*	*42.1*	***42.6***	*37.9*	*37.8*	*34.7*	
Science												*n.a.**	*n.a.**	*48.8*	*44.3*	***34.0***	*34.9*	*34.6*	*33.7*	
Literacy rate of female population 15-24 years old (%)	**97.9**				98.5						**97.9**					**97.9**				National Statistical Office
Literacy rate of male population 15-24 years old (%)	**98.6**				98.7						**98.1**					**98.2**				
Computer literacy of population 15-24 years old (%)															*49.2*	***48.9***	*50.4*	*51.8*	*54.7*	
Internet literacy of population 15-24 years old (%)															*32.1*	***31.3***	*36.5*	*39.7*	*44.6*	

a) Excluding schools under the Office of National Education Commission and Office of the Private Education Commission
b) Excluding schools under the Office the Private Education Commission
** No testing in this year*

Gender Equality and Women Empowerment	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Data Source
Ratio of girls to boys in primary education			70.1		70.8		77.1		80.4											Calculated from data from ICT Center, Ministry of Education
Ratio of girls to boys in primary education		0.97	0.98				1.02			1.01	**1.01**						1.04	1.04	1.04	
Ratio of women to men in tertiary education*		1	1	1	1.01	**1**	1.02	1.05	1.07	1.1	**1.12**	1.15					1.20	1.20	1.19	
Ratio of literate women to men over 40 years old (%)											**0.90**					**0.92**				Calculated from data from the National Statistical Office
Share of women in waged employment in non-agricultural sector (%)	**45.1**	45	44.4	44.8	44.8	**44**	43.6	44.3	46.1	46.1	**46.1**					**45.5**	45.1	45.0		
Proportion of women's to men's income in waged employment in non-agricultural sector (%)	**65.4**	62.5	70.2	68.5	68.3	**71.9**	71.7	76.1	74.9	73.6	**80.8**					**90**	94	92		
Proportion of seats held by women in national parliament (%)	**2.2**		3.5			**4.7**	6.41				**7.2**	9.6								Calculated from data from the Senate and the House of Representatives
Share of female MPs (%)												9.2				**10.6**		11.7		
Share of female senators (%)											**10.5**						23.5		15.8	
Proportion of women in Sub-district Administrative Organizations (%)											**6.9**	8.9					11.1			Department of Local Administration
Proportion of women in executive positions in the civil service (%)			9.9	10.5	10.1	**11.6**	12.7	14	13.5	12.5	**13.8**	14.2	17.8	20.9	20.2	**21.8**	23.1	22.2		Office of the Civil Service Commission

* 1991-2001 data include only Bachelor's degree students in state universities under the Bureau of University Affairs.

Child and Maternal Health	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Data Source
Under-five mortality rate (per 1,000 live births)	**12.8**	12.8	11.7	11.6	11.4	**11.6**	10.5	9.1	16.9	14.5	**11.9**	12.3	11.7	12.0	11.3	**10.8**	10.5	10.0	9.9	Bureau of Health Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health
Under-five mortality rate in highland areas in the North (Mae Hong Son Province) (per 1,000 live births)	***14.1***	*14.7*	*10.9*	*14.4*	*7.7*	***6.7***	*6.1*	*9.6*	*3.6*	*8.9*	***21.3***	*14.2*	*15.8*	*17.6*	*12.6*	***10.9***	*14.90*	*15.9*	*13.4*	
Under-five mortality rate in Yala Province (per 1,000 live births)							*8.9*	*4.7*	*11.7*	*14.7*	***14.93***	*13.89*	*15.54*	*15.35*	*15.72*	***12.73***	*15.63*	*13.54*	*13.76*	
Under-five mortality rate in Pattani Province (per 1,000 live births)							*12.0*	*10.5*	*5.9*	*18.6*	***15.24***	*16.66*	*16.87*	*17.35*	*15.48*	***12.97***	*14.87*	*14.57*	*13.86*	
Under-five mortality rate in Narathiwat Province (per 1,000 live births)							*9.2*	*4.1*	*9.1*	*18.4*	***16.47***	*12.95*	*18.68*	*16.85*	*16.98*	***18.22***	*18.41*	*15.85*	*18.03*	
Infant mortality rate (per 1,000 live birhts)	**8.0**	8.3	7.5	7.4	7.1	**7.2**	5.5	3.7	4.9	6.6	**6.2**	6.5	6.5	7.2	7.5	**7.6**	7.4	7.3	7.3	
Infant mortality rate in highland areas in the North (Mae Hong Son Province) (per 1,000 live births)	***14.1***	*14.7*	*10.9*	*14.4*	*7.7*	***6.7***	*6.1*	*9.6*	*3.6*	*8.9*	***10.8***	*7.4*	*8.3*	*7.6*	*6.8*	***7.2***	*8.7*	*11.6*	*9.5*	
Infant mortality rate in Yala Province (per 1,000 live births)	***8.7***	*7.4*	*7.0*	*5.7*	*4.5*	***5.7***	*5.8*	*3.3*	*6.7*	*8.7*	***9.0***	*9.2*	*10.2*	*10.8*	*12.6*	***9.4***	*11.1*	*10.0*	*10.4*	
Infant mortality rate in Pattani Province (per 1,000 live births)	***6.5***	*5.7*	*5.1*	*5.4*	*8.7*	***4.9***	*7.1*	*5.7*	*7.2*	*11.3*	***8.8***	*10.4*	*10.5*	*10.5*	*8.8*	***8.0***	*10.8*	*10.7*	*10.0*	
Infant mortality rate in Narathiwat Province (per 1,000 live births)	***7.1***	*9.0*	*8.4*	*6.2*	*6.2*	***3.6***	*5.0*	*2.7*	*5.9*	*10.6*	***9.9***	*8.2*	*12.8*	*11.9*	*12.5*	***14.8***	*13.0*	*12.3*	*14.1*	
Proportion of one year-old chidlren immunized against measles (%)	**78**									94.2				96.1					98.1	Department of Disease Control (survey data)
Maternal mortality ratio (per 100,000 live births)															44.5		41.6	49.9		Bureau of Health Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health
Maternal mortality rate in highland areas in the North (Mae Hong Son Province) (per 1,000 live births)	***0.3***	*1.6*	*0.6*	*0.9*			*26.3*	*28.3*	*76.1*	*31.8*	***30.1***	*49.1*	*55.3*	*33.2*	*79*	***n.a.***	*27.2*	*113.4*	*29.7*	
Maternal mortality rate in Yala Province (per 1,000 live births)	***1.0***	*0.8*	*0.5*	*0.5*		***41.6***	*47.6*	*22.9*	*18.9*	*47.9*		*32.0*		*40.5*	*53.2*	***52.4***	*49.8*	*39.5*	*12.9*	
Maternal mortality rate in Pattani Province (per 1,000 live births)	***0.8***	*0.4*	*0.7*	*0.5*		***65.9***	*49.8*	*24.6*	*40.1*	*88.7*	***26.7***	*53.5*	*68.1*	*31.9*	*18.3*	***53.9***	*37.5*	*58.6*	*50*	
Maternal mortality rate in Narathiwat Province (per 1,000 live births)	***1.4***	*1.1*	*0.5*	*0.7*		***54.6***	*83*	*31.7*	*15.2*	*56*	***48.9***	*32.6*	*66.7*	*60*	*53.3*	***24.6***	*35.9*	*55.7*	*47.8*	
Proportion of births attended by skilled heatlh personnel (%)	**90.8**	93.2	90.4	91.1		**94.4**			99			98								Department of Health
Contraceptive rate (%)	**64.7 (1989)**					**75.2**					**79.2**						**81.1**			
Births by women 15-19 years old (per 1,000 women 15-19 years old) (number)	**42.2**					**41.2**					**31.1**	33.7	37.9	39.2	47.3	**49.3**	48.9	**49.7**	50.1	Bureau of Registration Administration, Department of Provincial Administration and Department of Health
Ratio of completed ante-natal care (4 times) (%)	**n.a.**					**83.4**					**91.8**					**90.0**			n.a.	Department of Health
Unmet need (%)	**n.a.**						5.9					**1.2**	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	

HIV/AIDS, Malaria, TB, and CAD	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Data Source
HIV prevalence among population 15-24 years old (%)														0.95		**0.45**		0.64	Male 0.50; Female 0.58	Department of Disease Control
Grade 11 male students who always use condom when having sex (%)							30	22.7	25	16.7	**22.2**	22.4	25.7	38.9	38.3	**56.3**	52.8	66.7	54.5	
Proportion of population aged 15-24 with comprehensive correct knowledge of HIV/AIDS (%)														18.67		**31.15**		37.42		
Proportion of population with advanced HIV infection with access to antiretroviral drugs (%)																**41.00**		52.90	67.14; adult 66.49; children 86.06	National HIV/AIDS Committee
HIV prevalence among pregnant women (%)	***0***	*0.71*	*1.0*	*1.5*	*1.61*	***2.29***	*1.81*	*1.71*	*1.53*	*1.74*	***1.46***	*1.37*	*1.39*	*1.18*	*1.04*	***1.01***	*0.87*	*0.76*	*0.72*	*Department of Disease Control*
HIV prevalence among military conscripts (1st round) (%)				*3.6*	*4*	***2.5***	*2.2*	*2.1*	*1.9*	*1.6*	***1.4***	*0.5*	*0.5*	*0.5*	*0.5*	***0.4***	*0.5*	*0.4*	*0.5*	Armed Force Research Institute of Medical Sciences, Royal Thai Army Medical Department
HIV prevalence among military conscripts (2nd round) (%)			*3*	*3.5*	*2.6*	***2.3***	*1.9*	*1.6*	*1.2*	*1*	***0.8***	*0.8*	*0.9*	*0.6*	*0.5*	***0.5***	*0.4*	*0.5*		
Malaria incidence (per 1,000)	**5.20**	3.74	2.85	1.87	1.87	**1.55**	1.56	1.78	2.21	2.27	**1.36**	1.17	0.77	0.62	0.44	**0.49**	0.49	0.53	0.41	Department of Disease Control
Malaria incidence in 30 border provinces (per 1,000)								*4.40*	*4.34*	*5.16*	***3.69***	*2.82*	*1.71*	*1.81*	*1.05*	***1.15***	*1.28*	*1.35*	*1.06*	
Malaria death rate (per 100,000)	**2.3**	2.1	1.8	1.7	1.5	**1.4**	1.3	1.2	1.0	1.2	**1.0**	0.7	0.6	0.3	0.4	**0.3**	0.3	0.2	0.2	Bureau of Health Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health
Tuberculosis prevalence (per 100,000)			35.3	36.2	38.0	**37.5**	41.6	44.0	46.5	50.5	**51.8**	48.4		59.4	58.2	**55.4**	47.8	46.3	49	Department of Disease Control
Tuberculosis death rate (per 100,000)		6.5	6.3	6.1	5.9	**7.0**	7.7	6.2	5.8	5.6				4.8	4.2	**3.9**	3.8	4.1	9.0	
DOTS success rate (%)												69.0		70.0	73.0	**75.0**	78.2	81.3	82.7	
Coronary Artery Disease patients (per 100,000 population)																	*277.4*	*318.4*	*347.6*	
Coronary Artery Disease in-patients (per 100,000 population)	***13.7***	*25.5*	*28.7*	*23.1*	*24.5*	***31.6***	*40.7*	*49*	*59.9*	*81.9*	***98.0***	*111.1*	*140.9*	*165.7*	*185.7*	***198.7***	*232.7*	*262.3*	*276.8*	*Bureau of Health Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health*
Coronary Artery Disease death rate (per 100,000 population)	***1.3***	*1.6*	*1.9*	*2.4*	*2.0*	***2.7***	*4.7*	*3.1*	*3.7*	*7.9*	***10.1***	*12.4*	*14.4*	*19.1*	*17.7*	***18.7***	*19.4*	*20.8*	*21.2*	

* Causes of death changed from ICD-9 to ICD-10 in 1994

* Database adjustment for 1996-1998 causes of death

Environment	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Data source
Proportion of land area covered by forest (%)	**28 (1989)**	26.6		26		**25.6**			25.3		**33.2**				*32.7*	**31.4**	*30.9*			Royal Forest Department
Mangrove forest area (sq.km.)	***1,805.4***	*1,738.2*		*1,686.8*			*1,675.8*				***2,441.6***				*2,336.0*				*2,550.0*	*Department of Marine and Coastal Resources*
Proportion of area protected to maintain biological diversity (%)	**12.4**	13.5	14.0	13.9	14.1	**14.8**	15.0		15.2	15.7	**16.8**	17.7	18.2	18.3	18.3	**18.3**	18.8	18.8		Department of National Parks, Wildlife, and Plant Conservation
Marine catch per unit effort on marine resource (%)																			32.26	Department of Fisheries
Proportion of species threatened with extinction (%)																**11.9**				Office of Natural Resources and the Environment
Proportion of surface water used (%)																			26.5 (2009)	
Energy consumption per 1,000 bath of GDP (kg. of oil equivalent)	**15.4**	15.1	15.1	14.9	14.9	**15.3**	15.5	16.1	16.2	16.2	**15.9**	16.1	16.4	16.2	16.6	**16.2**	15.6	15.2	15.2	Office Of Energy Policy and Planning
Share of renewable energy in commercial final energy (%)														*0.5*	*1.1*	***2.5***	*3.9*	*5*	*6.4*	*Department of Alternative Energy Development and Efficiency*
Carbon dioxide emission (metric tons per capita)		2.4				**3.7**		2.4	2.3	2.4	**2.3**	2.5			4.3					Office of Natural Resources and the Environment
Consumption of ozone-depleting CFCs (ODP tons)	**7,263**					**8,314**		4,486	3,811	5,619	**3,655**	3,393	2,177	1,857	1,358	**1,260**	454	322	208	Department of Industrial Works
Proportion of main rivers that water quality is "fair" or better (%)													*65*	*63*	*74*	***66***	*74*	*54*	*76*	*Department of Pollution Control*
Proportion of municipal waste recycled (%)	***5***											*16*	*18*	*19*	*21*	***22***	*22*	*22*	*23*	
Proportion of urban population with sustainable access to safe drinking water (%)	**96.5**										**97.0**					**96.3**				National Statistical Office
Proportion of rural population with sustainble access to safe drinking water (%)	**76.4**										**91.0**					**87.0**				
Proportion of urban population with access to improved sanitation (%)	**99.0**										**99.5**			98.9	99.0	**99.6**				
Proportion of rural population with access to improved sanitation (%)	**83.1**										**97.0**			97.4	99.4	**98.6**				
Proportion of urban population having secure tenure (owned, leased, rented) (%)	**87.8**										**91.2**					**88.6**				
Proportion of rural population having secure tenure (owned, leased, rented) (%)	**96.0**										**94.8**					**94.0**				

Global Partnership	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Data Source
Value of ODA (million bath)							4,250						6,688		8,064			6.014		Thailand International Development Cooperation Agency
Value of ODA (million US$)							170						167		202			172		
Proportion of ODA to GNP (%)							0.13						0.13		0.19			0.1		
Proportion of grants to ODA (%)							12						12		13			20		
Proportion of loans to ODA (%)							88						88		87			80		
Proportion of OAD to least developed countries (%)							95						90		90			90		
Population with health insurance (%)														93.01	95.47	**96.25**	97.82	98.75	99.16	National Health Security Office
Telephone line per 100 population (lines)																**10.8**	10.9	10.9	10.6	National Telecommunications Commission
Cellular subscribers per 100 population (persons)																**48.2**	62.9	82.9	92.0	
Internet users per 100 population (persons)																**11.3**	13.1	14.3	15.6	

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